



# INDIAN HEALTH FOCUS: **WOMEN**



**December 1996**

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
INDIAN HEALTH SERVICE  
Office of Planning, Evaluation, and Legislation  
Division of Program Statistics

Mike Durkin '96



# Indian Health Focus: Women

## Indian Health Service

Michael H. Trujillo, M.D., M.P.H.  
Director

## Office of Planning, Evaluation, and Legislation

Leo J. Nolan  
Acting Associate Director

Richard J. McCloskey  
Acting Deputy Associate Director

## Division of Program Statistics

Anthony J. D'Angelo  
Director



# Table of Contents

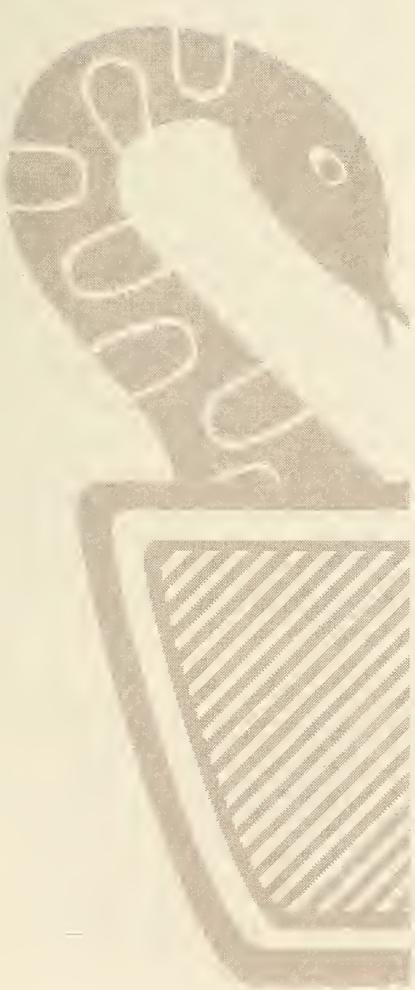
<b>Introduction</b>	<b>1</b>	<i>Table 5. -</i>	<b>15</b>
<b>Summary of Data Shown</b>	<b>2</b>	Number and Percent Distribution of Live Births	
<b>Sources and Limitations of Data</b>	<b>5</b>	<i>Chart 6. -</i>	<b>16</b>
Population Statistics	5	Family Planning Visit Rates, FY 1994	
Vital Event Statistics	5	<i>Table 6. -</i>	<b>16</b>
Patient Care Statistics	6	Number and Rate of Family Planning Visits	
<b>Sources of Additional Information</b>	<b>7</b>	<i>Chart 7. -</i>	<b>17</b>
<b>Tables and Charts</b>	<b>8</b>	Live Births with Prenatal Care <i>Beginning in First Trimester,</i> Calendar Years 1991-1993	
<i>Chart 1. -</i>	8	<i>Table 7. -</i>	<b>17</b>
Population by Age and Sex, 1990		Live Births with Prenatal Care <i>Beginning in First Trimester,</i> Calendar Years 1991-1993	
Census		<i>Chart 8. -</i>	<b>18</b>
<i>Table 1. -</i>	9	Percent of Mothers Who Smoked During Pregnancy for All Births and Low Birth Weight Births	
Age and Sex Percent Distribution		<i>Table 8. -</i>	<b>19</b>
<i>Chart 2. -</i>	10	Percent of Mothers Who Smoked During Pregnancy for All Births and Low Birth Weight Births	
Employment Status by Sex		<i>Chart 9. -</i>	<b>20</b>
<i>Table 2. -</i>	10	Percent of Mothers Who Drank During Pregnancy	
Selected Economic Profiles for the United States, 1990 Census		<i>Table 9. -</i>	<b>20</b>
<i>Chart 3. -</i>	11	Percent of Mothers Who Drank During Pregnancy for All Births and Low Birth Weight Births	
<i>Births of Low Weight (Under 2,500 Grams) as Percent of Total Live Births by Age of Mother</i>		<i>Chart 10. -</i>	<b>21</b>
<i>Table 3. -</i>	12	Rate of Live Births with Diabetic Mother	
<i>Births of Low Birth Weight (Under 2,500 Grams) by Age of Mother</i>		<i>Table 10. -</i>	<b>21</b>
<i>Chart 4. -</i>	13	Rate of Live Births with Diabetic Mother	
High Weight Births		<i>Chart 11.1 -</i>	<b>22</b>
<i>Table 4. -</i>	13	Rate of First Cesarian Delivery	
<i>Births of High Weight as a Percent of Total Live Births</i>		<i>Chart 11.2 -</i>	<b>22</b>
<i>Chart 5.1 -</i>	14	Rate of Vaginal Births After Previous Cesarian Delivery	
<i>Birth Order by Age of Mother- American Indians and Alaska Natives</i>			
<i>Chart 5.2 -</i>	14		
<i>Birth Order by Age of Mother- U.S. All Races</i>			
<i>Chart 5.3 -</i>	14		
<i>Birth Order by Age of Mother- U.S. White</i>			

<i>Table 11.</i> - Rates of First Cesarian Delivery and Vaginal Births After Previous Cesarian Delivery	23	<i>Table 19.</i> - Homicide Mortality Rates by Age and Sex	36
<i>Chart 12.</i> - Life Expectancy at Birth, Females, Calendar Years 1991-1993	24	<i>Chart 20.</i> - Chronic Liver Disease and Cirrhosis Death Rates by Age and Sex	37
<i>Chart 13.</i> - Deaths by Age and Sex	24	<i>Table 20.</i> - Chronic Liver Disease and Cirrhosis Mortality Rates by Age and Sex	38
<i>Table 13.</i> - Number and Percent Distribution of Deaths by Age and Sex	25	<i>Chart 21.</i> - Diabetes Mellitus Death Rates by Age and Sex	39
<i>Chart 14.</i> - Mortality Rates for Leading Causes: Females	26	<i>Table 21.</i> - Diabetes Mellitus Mortality Rates by Age and Sex	40
<i>Table 14.</i> - Leading Causes of Death by Sex	26	<i>Chart 22.</i> - Diseases of the Heart Death Rates by Age and Sex	41
<i>Chart 15.</i> - Alcoholism Death Rates by Age and Sex	27	<i>Table 22.</i> - Diseases of the Heart Mortality Rates by Age and Sex	42
<i>Table 15.</i> - Alcoholism Mortality Rates by Age and Sex	28	<i>Chart 23.</i> - Cerebrovascular Diseases Death Rates by Age and Sex	43
<i>Chart 16.</i> - Drug-Related Death Rates by Age and Sex	29	<i>Table 23.</i> - Cerebrovascular Diseases Mortality Rates by Age and Sex	44
<i>Table 16.</i> - Drug-Related Mortality Rates by Age and Sex	30	<i>Chart 24.</i> - Malignant Neoplasm Death Rates by Age and Sex	45
<i>Chart 17.</i> - Accident Death Rates by Age and Sex	31	<i>Table 24.</i> - Malignant Neoplasm Mortality Rates by Age and Sex	46
<i>Table 17.</i> - Accident Mortality Rates by Age and Sex	32	<i>Chart 25.</i> - Mortality Rates for Leading Cancer Sites, Females	47
<i>Chart 18.</i> - Suicide Death Rates by Age and Sex	33	<i>Table 25.</i> - Twenty Leading Sites for Cancer Deaths for Female Decedents	47
<i>Table 18.</i> - Suicide Mortality Rates by Age and Sex	34	<i>Chart 26.</i> - Age-Adjusted Breast Cancer Mortality Rates for Females, CY 1991-1993	48
<i>Chart 19.</i> - Homicide Death Rates by Age and Sex	35		

<i>Table 26. -</i> Age-Adjusted Breast Cancer Mortality Rates for Females, CY 1991-1993	48
<i>Chart 27. -</i> Age-Adjusted Cervical Cancer Mortality Rates for Females, CY 1991-1993	49
<i>Table 27. -</i> Age-Adjusted Cervical Cancer Mortality Rates for Females, CY 1991-1993	49
<i>Chart 28. -</i> Leading Causes of Hospitalization for Females	50
<i>Table 28. -</i> Ten Leading Causes of Hospitalization by Sex	50
<i>Chart 29.-</i> Leading Causes of Female Ambulatory Medical Visits	51
<i>Table 29. -</i> Number of Ambulatory Medical Clinical Impressions for Leading Major Categories by Sex	51
<b>Methods Used to Rank Leading Sites of Cancer Deaths</b>	<b>52</b>



# Introduction



The Indian Health Service (IHS) is an agency of the Department of Health and Human Services. The IHS goal is to raise the health status of American Indians and Alaska Natives to the highest possible level. The mission is to provide a comprehensive health services delivery system for American Indians and Alaska Natives with opportunity for maximum Tribal involvement in developing and managing programs to meet their needs.

The IHS has carried out its responsibilities through developing and operating a health services delivery system designed to provide a broad-spectrum program of preventive, curative, rehabilitative, and environmental services. This system integrates health services delivered directly through IHS facilities, purchased by IHS through contractual arrangements with providers in the private sector, and delivered through Tribally-operated programs and urban Indian health programs.

The IHS is concerned with the health of American Indians and Alaska Natives of all ages. The IHS presents an overview of the health status of Indians in its annual publication, *Trends in Indian Health*. However, IHS recognizes that there are segments of the Indian population that require special attention, such as infants, youth, women, and the elderly. This publication examines the health status of Indian women. It is based on data published in the 1996

*Trends in Indian Health and Regional Differences in Indian Health.*

The population of interest for this publication is American Indian and Alaska Native women residing in the IHS service area. The IHS service area comprises the geographic areas in which IHS has responsibility (on and near reservations). Approximately 60 percent of American Indians and Alaska Natives in the U.S. reside in the IHS service area. In 1997, there were 1.43 million Indians in the IHS service area compared to 2.37 million in the entire U.S.

# Summary of Data Shown



American Indian and Alaska Native women comprise 51 percent of the IHS service population, as is true for U.S. All Races and White women in their population groups. However, Indian women are considerably younger than their counterparts in these populations. According to the 1990 census, 49.6 percent of Indian women are younger than 25 years of age and 6.5 percent are older than 64 years. The comparable percentages for U.S. All Races women are 34.8 and 14.6, and for U.S. White women are 33.4 and 15.7. Indian women generally have a lower social and economic status than women in the general population. According to the 1990 census, 13.4 percent of Indian women aged 16 and older are unemployed in contrast to 6.2 and 5.0 percents for the U.S. All Races and White populations, respectively.

Indian women on average give birth to children at younger ages than women in the general population. For Indian women, 45 percent are under age 20 when they have their first child. This compares to 24 percent for U.S. All Races mothers and 21 percent for U.S. White mothers. Despite the large number of young mothers, low birth weight (under 2,500 grams) occurs at lower rates among Indian women than it does for women in the All Races population. For Indian women, 5.8 percent of reported live births are of low birth weight, the same as for

the White population. The percentage for U.S. All Races population is considerably higher at 7.1. High birth weight births (4,000 grams or more) are a relatively greater problem for Indian women than low weight births. For Indian women, 12.7 percent of reported live births are of high birth weight, compared to 10.7 percent for U.S. All Races women.

Family planning occurs at widely different rates among the IHS Areas. Indian women of childbearing age (15 to 44 years) have family planning visits in the California Area at a rate of 272.0 visits per 1,000 women (15 to 44 years). This, the lowest rate, is in sharp contrast to the highest rate of 754.4 in Alaska. Indian women generally begin prenatal care later than women in the U.S. All Races population. Prenatal care begins in the first trimester for 62.0 percent of Indian live births, whereas this percentage for the general population is 77.7. None of the IHS Areas reach the U.S. All Races rate, although Alaska is close at 75.8. The Navajo rate of 47.8, the lowest Area rate, is only 62 percent of the All Races rate.

Indian women are more likely to exhibit risky behaviors during pregnancy than their counterparts in the U.S. All Races population. For example, 21.0 percent of Indian women report that they smoke during pregnancy. Women in the U.S. All Races

population, in contrast, smoke at a lower rate during pregnancy, i.e., 16.9 percent. There appears to be a relationship between smoking and low birth weight births. Of all Indian low weight births, 28.2 percent are to women who report smoking during pregnancy. Alcohol consumption is another risky behavior more prevalent among Indian pregnant women. Indian women report that they drink during pregnancy at a rate 2.5 times the rate for women in the U.S. All Races population, i.e., 6.5 percent of Indian mothers compared to 2.6 percent for All Races mothers. Partially as a result of behaviors (e.g., dietary) prior to pregnancy, Indian women giving birth are 61 percent more likely to be diabetic than All Races women giving birth.

Indian women tend to give birth using different methods of delivery than women in the U.S. All Races population. They have a 25 percent lower rate of primary cesarean deliveries (i.e., number of first cesarian deliveries per 100 live births to women who have not had a prior cesarean delivery) than All Races women. Also, Indian women who have had a cesarean delivery are 38 percent more likely to have a subsequent vaginal delivery than women in the All Races population.

The life expectancy for Indian females is 7.8 years greater than it is for Indian males, i.e., 77.1 compared to 69.3. Therefore, it follows that Indian females die at relatively older ages than Indian males. The percentage of deaths pertaining to ages under 45 is 23 per-

cent for Indian females and 35 for males. Indian females die mainly from diseases of the heart and malignant neoplasms (the two leading causes of death). The same is true for U.S. All Races and White females. Diseases of the heart is also the leading cause of death for Indian males, but accidents is the second leading cause.

Substance abuse, especially alcohol, is a serious problem in many Indian communities. Although alcohol abuse is a more serious problem for Indian males than females, it still takes a considerable death toll among Indian females. The Indian female alcoholism death rate peaks at 69.4 deaths per 100,000 population for age group 45 to 54 years. For U.S. All Races females, the rate only reaches double digits for one age group, i.e., 10.1 for 55 to 64 year old women. The age-specific rates for U.S. White females do not exceed a single digit. In contrast, age-specific drug-related death rates for Indian females are equal to or greater than those for Indian males except for age groups 25 to 44 and 55 to 64 years. However, some of these rates are based on small numbers and should be interpreted with caution. The highest female rate (8.3) occurs among the 45 to 54 year age group. Indian female age-specific rates are generally higher than those for U.S. All Races and White females.

Indian women are less likely to die from accidents, homicide, and suicide than Indian men, but, for most age groups, Indian women are more at risk from these causes than



women in the general population. The age-specific death rate for accidents for Indian females is higher for all age groups except 85 years and older in comparison to U.S. All Races and White females. Indian female suicide rates are greater than those for U.S. All Races females for age groups under 45 years and for White females for age groups under 35 years. However, for older age groups, the Indian female rates are lower. The Indian female age-specific homicide rate is greater than the rate for U.S. All Races females for all age groups except 5 to 24 and 75 to 84 years. It exceeds the rate for U.S. White females for all age groups except 75 to 84 years.

Indian women die from chronic liver disease and cirrhosis and diseases of the heart at lower rates than Indian men. The cerebrovascular diseases death rate is similar for Indian males and females among the various age groups. In contrast, Indian women are more likely to die from diabetes

mellitus than Indian men for age groups 55 years and older. In comparison to females in the U.S. All Races and White populations, Indian females for most age groups have much higher death rates due to chronic liver disease and cirrhosis and diabetes mellitus. The Indian female diseases of the heart death rate is similar to that of U.S. All Races females for the younger age groups, but is 1.2 to 1.4 times the White female rate for age groups 35 to 64 years. It then becomes increasingly less (proportionately) than the rate of its All Races and White counterparts for age groups over 64 years. The Indian female death rate for cerebrovascular diseases tends to be greater than the rates for All Races and White females in age groups under 75 years, but is less for age groups 75 years and over.

Persons in the U.S. All Races and White populations are more likely to die from malignant neoplasms than Indians. For all cancer deaths, Indian female age-specific rates are less than those for females of these two population groups for all age groups except 15 to 24 years. Women in all three population groups have the same top three leading sites for cancer deaths; trachea, bronchus, and lung; breast; and colon. Pancreas is the fourth leading site for All Races women, as it is for Indian women, but it is number five for White women. Ovary (sixth for Indian women) is fifth for All Races women and fourth for White women. Cervix uteri, the fifth leading Indian site, is eighth for All Races and ninth for Whites. The Indian female



age-adjusted cervical cancer death rate (4.3 deaths per 100,000 population) is 1.6 times the rate for U.S. All Races females (2.7). In contrast, the Indian female age-adjusted breast cancer death rate (12.3 deaths per 100,000 population) is 55 percent of the rate for U.S. All Races females (22.4).



# Sources and Limitations of Data

## Population Statistics

The IHS service population consists of American Indians and Alaska Natives identified to be eligible for IHS services. IHS service population estimates are based on official U.S. Bureau of the Census county data. The Census Bureau enumerates those individuals who identify themselves as being American Indian, Eskimo or Aleut. The IHS service population is estimated by counting those American Indians, Eskimos, and Aleuts (as identified during the census) who reside in the geographic areas in which IHS has responsibilities ("on or near" reservations, i.e., contract health service delivery areas). These people may or may not use IHS services.

IHS user population estimates are based on data from the IHS Patient Registration System. Patients who receive direct or contract health services from IHS or Tribally-operated programs are registered in the Patient Registration System. Those registered Indian patients that had at least one direct or contract inpatient stay, ambulatory medical visit, or dental visit during the last 3 years are defined as users. IHS user population figures are used for calculating IHS patient care rates. In contrast, IHS service population figures are used in calculating Indian vital event rates since State birth and death certificates do not provide information on use of IHS services.

IHS service populations between census years (e.g., 1980 and 1990) are estimated by a smoothing technique in order to show a gradual transition between census years. IHS service populations beyond the latest census year (1990) are projected through linear regression techniques, using the most current 10 years of Indian birth and death data provided by the National Center for Health Statistics. The natural change (estimated number of births minus estimated number of deaths) is applied to the latest census enumeration.

The social and economic data contained in this publication are from the 1990 census. They reflect the characteristics of persons that self-identified as Indian during the census.

## Vital Event Statistics

American Indian and Alaska Native vital event statistics are derived from data furnished annually to the IHS by the National Center for Health Statistics (NCHS). Vital event statistics for the U.S. population were derived from data appearing in various NCHS publications, as well as from some unpublished data from NCHS. NCHS obtains birth and death records for all U.S. residents from the State departments of health, based on information reported on official State birth and death certificates. The records NCHS provides IHS contain the same basic demographic items as the vital event records

maintained by NCHS for all U.S. residents, but with names, addresses, and record identification numbers deleted. It should be noted that Tribal identity is not recorded on these records. Tabulations of vital events for this publication are by place of residence.

It is known that there is under reporting of Indian race on State death certificates, especially in the California and Oklahoma Areas. Therefore, IHS mortality-based indices should be considered conservative estimates of the true values.

### Patient Care Statistics

Patient care statistics are derived from IHS reporting systems. There are four main patient care reporting systems. The Monthly Inpatient Services Report is a patient census report that is prepared by each IHS hospital. It indicates the number of discharges and days by type of service (e.g., adult, pediatric, obstetric, newborn), and is used for the direct inpatient workload statistics. The Inpatient Care System is the source of IHS hospital inpatient data pertaining to various patient characteristics (age, sex, principal diagnoses, other diagnoses, community of residence, etc.). The data are collected daily, one record per discharge. The Contract Care System is the source of similar contract hospital inpatient data.

The Ambulatory Patient Care System is the source of data pertaining to the number of ambulatory medical visits at IHS facilities by various patient characteristics (age, sex,

clinical impression, community of residence, etc.). The data are collected daily, one record per ambulatory medical visit. The Contract Care System is the source of similar contract ambulatory medical visit data.



# Sources of Additional Information

Additional Indian health status information can be obtained from the IHS Division of Program Statistics. Specific responsibilities are as follows:

This publication, other IHS publications, and additional information about the IHS are available on the IHS Home Page on the Internet. The address is:

<http://www.ihs.gov/>

## **General Information**

Anthony J. D'Angelo, Director,  
Division of Program Statistics

## **Demographic Statistics**

Aaron O. Handler, Chief,  
Demographic Statistics Branch  
Linda J. Querec, Statistician  
JoAnn N. Pappalardo,  
Computer Systems Analyst  
Barbara A. Moore, Statistical  
Assistant

## **Patient Care Statistics**

Stephen F. Kaufman, Chief,  
Patient Care Statistics Branch  
Bonnie M. Matheson,  
Computer Assistant

Copies of this and other  
Division publications may be  
obtained from Priscilla  
Sandoval or Monique E. Alston.

The Division address and  
phone number are as follows:

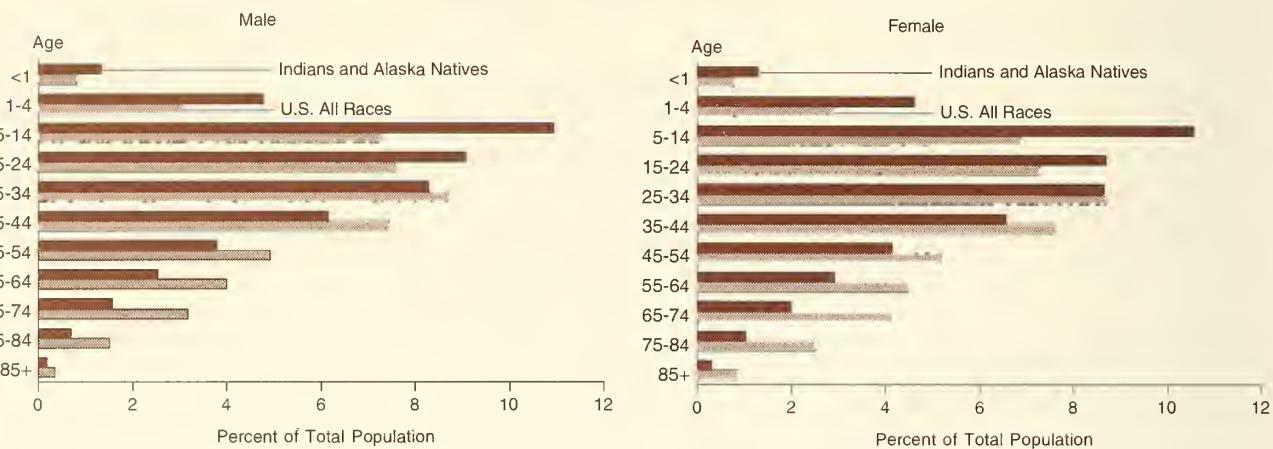
Indian Health Service  
Office of Planning, Evaluation,  
and Legislation  
Division of Program Statistics  
Twinbrook Metro Plaza  
12300 Twinbrook Parkway,  
Suite 450  
Rockville, Maryland 20852

Phone: 301-443-1180  
Fax: 301-443-1522  
E-mail: opel@smtp.ihs.gov



### ► Chart 1. Population By Age and Sex, 1990 Census

Indian women comprise 51 percent of the IHS service population, as is true for U.S. All Races and White women in the population groups. Indian women are considerably younger than women in the general population. According to the 1990 census, 49.6 percent of Indian women are younger than 25 years of age compared to 34.8 percent for the U.S. All Races population and 33.4 percent for the U.S. White population. For Indian women, 6.5 percent are older than 64 years in contrast to 14.6 and 15.7 percents for the U.S. All Races and White populations, respectively.



► **Table 1. Age and Sex Percent Distribution**

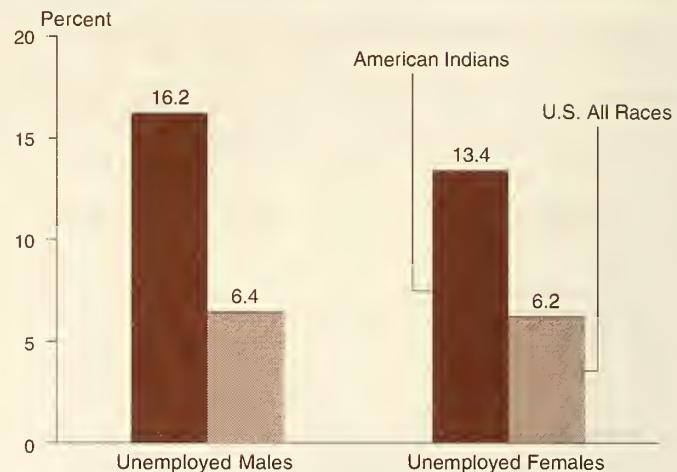
American Indians and Alaska Natives, IHS Service Area and U.S. All Races and White Populations, 1990 Census Data

Age Group	Indian and Alaska Native, IHS Service Area 1/		U.S. All Races		U.S. White	
	Male	Female	Male	Female	Male	Female
<b>Percent of Both Sexes:</b>						
All Ages	49.274	50.726	48.747	51.253	48.941	51.059
Under 1 year	1.322	1.294	0.812	0.775	0.768	0.730
1-4 years	4.774	4.616	3.048	2.907	2.909	2.761
5-14 years	10.921	10.568	7.226	6.885	6.932	6.567
15-24 years	9.066	8.690	7.605	7.277	7.374	6.995
25-34 years	8.284	8.643	8.670	8.684	8.658	8.508
35-44 years	6.148	6.564	7.442	7.610	7.579	7.587
45-54 years	3.794	4.136	4.918	5.156	5.091	5.245
55-64 years	2.537	2.913	4.003	4.486	4.223	4.647
65-74 years	1.566	1.977	3.179	4.076	3.415	4.335
75-84 years	0.687	1.022	1.506	2.520	1.628	2.725
85 years and over	0.175	0.303	0.338	0.877	0.364	0.959
<b>Percent of Within Each Sex:</b>						
All Ages	100.000	100.000	100.000	100.000	100.000	100.000
Under 1 year	2.683	2.551	1.665	1.512	1.570	1.430
1-4 years	9.689	9.100	6.253	5.673	5.944	5.407
5-14 years	22.164	20.834	14.823	13.434	14.163	12.862
15-24 years	18.399	17.133	15.602	14.198	15.066	13.700
25-34 years	16.812	17.038	17.787	16.941	17.693	16.663
35-44 years	12.477	12.940	15.267	14.847	15.487	14.859
45-54 years	7.700	8.153	10.089	10.061	10.401	10.272
55-64 years	5.149	5.742	8.211	8.753	8.628	9.101
65-74 years	3.178	3.897	6.522	7.954	6.978	8.491
75-84 years	1.394	2.015	3.089	4.917	3.326	5.337
85 years and over	0.355	0.597	0.694	1.710	0.744	1.878

1/ Based upon data from the 1990 Census modified age, race, and sex file, and current (1996) IHS service area boundaries. Percentage point distributions were adjusted for errors due to rounding. More recent population estimates for the American Indian and Alaska Native population by age and sex are unavailable at the county level. As a result, IHS service area estimates by age and sex, which need to be based on county level data, could not be prepared.

► **Chart 2. Employment Status by Sex, American Indians and U.S. All Races, 1990 Census**

Indian women do not fare as well in the job market as women in the general population. According to the 1990 census, 13.4 percent of Indian women aged 16 and older are unemployed in contrast to 6.2 and 5.0 percents for the U.S. all Races and White populations, respectively.



**Table 2. Selected Economic Profiles for the United States, 1990 Census**

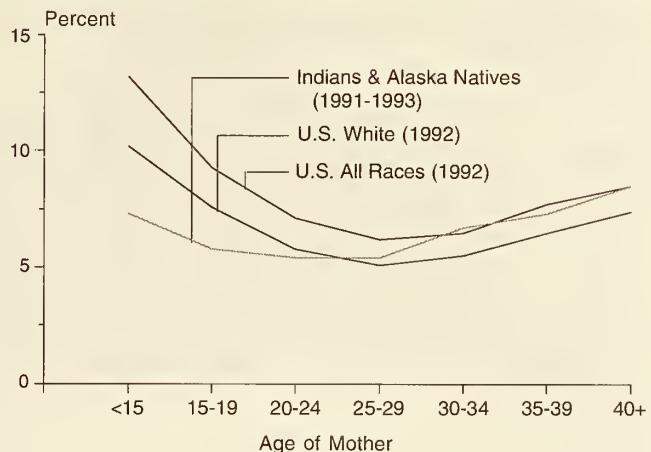
	American Indian and Alaska Native	All Races	White	Black	Asian and Pacific Islander	Hispanic
<b>Educational Attainment</b>						
(Persons 25 years and older):						
Percent less than 9th grade	14.1	10.4	8.9	13.8	12.9	30.7
Percent 9th to 12th grade, no diploma	20.6	14.4	13.1	23.2	9.5	19.5
Percent high school grad or higher	65.3	75.2	77.9	63.1	77.5	49.8
Percent bachelor's degree or higher	8.9	20.3	21.5	11.4	36.6	9.2
<b>Employment Status by Sex</b>						
(Persons 16 years and older):						
Percent unemployed, males	16.2	6.4	5.3	13.7	5.1	9.8
Percent unemployed, females	13.4	6.2	5.0	12.2	5.5	11.2
<b>Household Income in 1989:</b>						
Median household income	\$19,897	\$30,056	\$31,435	\$19,758	\$36,784	\$24,156
<b>Percent Below the Poverty Level by Age:</b>						
All ages	31.6	13.1	9.8	29.5	14.1	25.3
Under 5 years	43.1	20.1	13.8	44.0	17.5	33.4
5 years	41.6	19.7	13.6	42.8	18.0	33.9
6 to 11 years	37.7	18.3	12.5	39.8	17.3	32.6
12 to 17 years	33.1	16.3	11.0	35.5	16.3	30.3
18 to 64 years	27.7	11.0	8.5	23.4	13.0	21.3
65 to 74 years	26.9	10.4	8.4	28.6	11.3	21.9
75 years and older	33.3	16.5	14.6	37.3	13.5	27.8

NOTE: American Indian data are for residents of the 35 Reservation States. (South Carolina was added as a Reservation State in FY 1994. Indiana was added as a Reservation State in 1995.)

SOURCE: U.S. Bureau of the Census, Minority Economic Profiles, July 24, 1992, Tables CPH-L-92, 93, 94 and 95, and unpublished data from the U.S. Bureau of the Census.

► **Chart 3. Births of Low Weight (Under 2,500 Grams) as Percent of Total Live Births by Age of Mother**

Low birth weight occurs at lower rates among Indian women than it does for women in the U.S. All Races population. For Indian women, 5.8 percent of reported live births are of low birth weight, the same as for the U.S. White population. This compares to 7.1 percent for the U.S. All Races population. Indian women experience their highest rate of low weight births (8.5 percent) in the age group 40 years and older. For the U.S. All Races and White populations, this occurs in the under 15 year old age group, the rates are 13.2 and 10.2 percents, respectively.



► **Table 3. Births of Low Birth Weight (Under 2,500 Grams) by Age of Mother**

American Indians and Alaska Natives, IHS Service Area, 1991-1993, and U.S. All Races and White Populations, 1992

<b>Age of Mother</b>	<b>Indian and Alaska Native</b>		
	<b>Total Live Births</b>	<b>Number Low Weight</b>	<b>Percent Low Weight</b>
ALL AGES	101,226 1/	5,911	5.8
Under 20 years	20,305	1,177	5.8
Under 15 years	385	28	7.3
15-19 years	19,972	1,149	5.8
20-24 years	33,547	1,820	5.4
25-29 years	24,989	1,358	5.4
30-34 years	15,020	1,005	6.7
35-39 years	6,125	450	7.3
40 years and over	1,188	101	8.5
	<b>U.S. All Races</b>		
	<b>Total Live Births</b>	<b>Number Low Weight</b>	<b>Percent Low Weight</b>
ALL AGES	4,060,531 1/	287,493	7.1
Under 20 years	517,030	48,315	9.3
Under 15 years	12,189	1,608	13.2
15-19 years	504,841	46,707	9.3
20-24 years	1,069,314	76,290	7.1
25-29 years	1,178,054	73,223	6.2
30-34 years	894,309	58,428	6.5
35-39 years	344,212	26,343	7.7
40 years and over	57,612	4,894	8.5
	<b>U.S. White</b>		
	<b>Total Live Births</b>	<b>Number Low Weight</b>	<b>Percent Low Weight</b>
ALL AGES	3,198,525 1/	185,662	5.8
Under 20 years	347,732	26,609	7.7
Under 15 years	5,352	548	10.2
15-19 years	342,380	26,061	7.6
20-24 years	813,671	47,398	5.8
25-29 years	963,698	49,242	5.1
30-34 years	744,785	40,643	5.5
35-39 years	282,279	18,329	6.5
40 years and over	46,360	3,441	7.4

1/ Excludes 180 American Indian and Alaska Native live births, 4,483 U.S. All Races live births, and 3,153 U.S. White live births with birth weight not stated.

#### ► Chart 4. High Weight Births

High birth weight births (4,000 grams or more) are a relatively greater problem for Indian women than low weight births. High birth weight infants are a complication of diabetic pregnancies and should be of concern. For Indian women, 12.7 percent of reported live births are of high birth weight, compared to 5.8 percent for low weight births. The U.S. All Races population has a lower rate of high birth weight births, i.e., 10.7 percent. The rate varies considerably among IHS Areas, ranging from 7.4 percent in Albuquerque to 18.6 percent in Alaska.

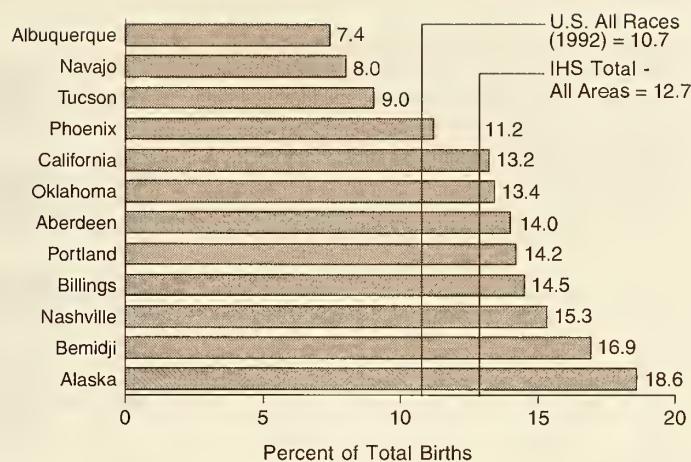


Table 4. Births of High Weight as a Percent of Total Live Births, Calendar Years 1991-1993

	Total Live Births 1/	Number High Weight 2/	Percent High Weight 3/
U.S. All Races (1992)	4,065,014	435,713	10.7
All IHS Areas	101,406	12,904	12.7
Aberdeen	8,465	1,186	14.0
Alaska	8,807	1,636	18.6
Albuquerque	5,707	424	7.4
Bemidji	5,355	904	16.9
Billings	4,467	649	14.5
California	7,700	1,013	13.2
Nashville	3,528	538	15.3
Navajo	16,887	1,355	8.0
Oklahoma	18,809	2,517	13.4
Phoenix	10,197	1,140	11.2
Portland	9,783	1,389	14.2
Tucson	1,701	153	9.0

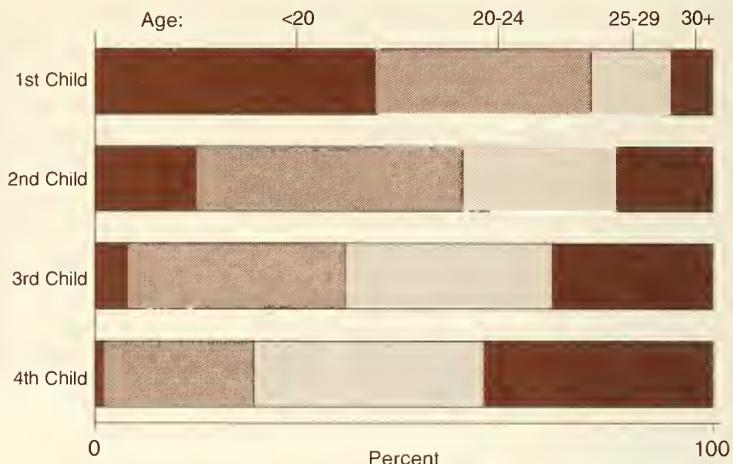
1/ Includes 4,483 U.S. All Races live births and 180 American Indian/Alaska Native live births with birth weight not stated.

2/ Births of 4,000 grams or more (8lb, 14oz or more).

3/ Percent high weight based on live births with a birth weight reported.

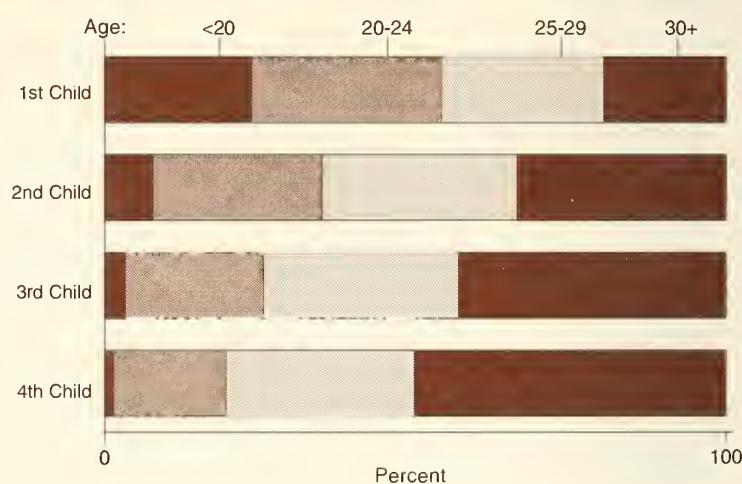
► **Chart 5.1. Birth Order by Age of Mother, Percent Within Birth Order, American Indians and Alaska Natives**

Indian women on average give birth to children at younger ages than women in the general population. For Indian women, 45 percent are under age 20 when they have their first child. Only 2 percent are older than 34 at the time of their first born.



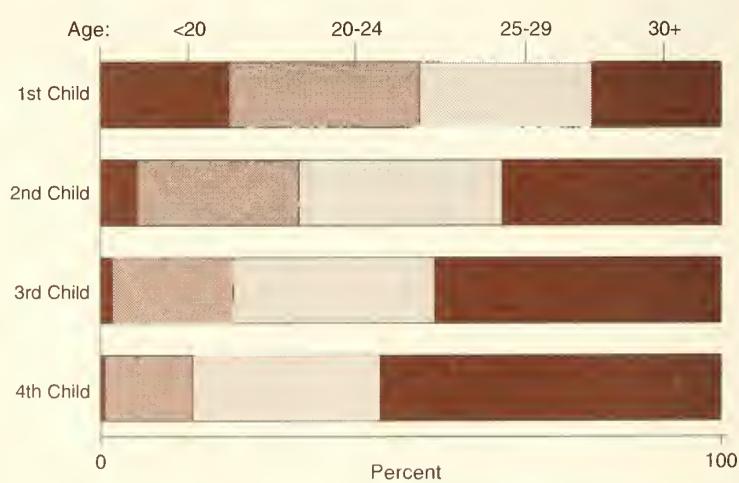
**Chart 5.2. Birth Order by Age of Mother, Percent Within Birth Order, U.S. All Races**

Women in the U.S. All Races population tend to wait longer for their first child than Indian women. Twenty-four percent are under age 20 and 5 percent are older than 34 when they have their first child.



**Chart 5.3. Birth Order by Age of Mother, Percent Within Birth Order, U.S. White**

The U.S. White population is similar to the general population in terms of mother's age at birth of first child. Twenty-one percent of White mothers are under age 20 and 5 percent are older than 34 when they have their first child.



► **Table 5. Number and Percent Distribution of Live Births**

By Age of Mother within Birth Order

Age Group	Total Live Births	Live Birth Order					
		1st Child	2nd Child	3rd Child	4th Child	5th Child	6th+ Child
<b>American Indian and Alaska Native, IHS Service Area, 1991-1993</b>							
ALL AGES	101,019 1/	32,915	26,603	18,608	11,166	5,976	5,751
ALL AGES	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 20 years	20.1	45.1	16.3	5.1	1.3	0.3	—
20-24 years	33.2	35.1	43.1	35.2	24.3	15.0	5.7
25-29 years	24.7	13.0	25.0	33.6	37.3	34.9	26.1
30-34 years	14.8	5.1	11.5	18.6	25.2	31.3	36.4
35-39 years	6.0	1.4	3.6	6.5	10.2	15.5	24.8
40-49 years	1.2	0.3	0.5	1.0	1.7	3.0	7.0
<b>U.S. All Races, 1992</b>							
ALL AGES	4,046,559 2/	1,632,448	1,311,397	665,150	260,751	98,448	78,365
ALL AGES	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 20 years	12.7	23.7	7.8	3.3	1.5	0.5	0.1
20-24 years	26.3	30.4	27.2	22.2	18.1	13.8	6.2
25-29 years	29.0	26.3	31.5	31.4	30.2	28.5	21.2
30-34 years	22.0	14.5	24.3	29.4	31.5	32.7	33.6
35-39 years	8.5	4.5	8.2	12.0	15.8	19.9	28.4
40-49 years	1.4	0.7	1.1	1.7	2.9	4.6	10.6
<b>U.S. White, 1992</b>							
ALL AGES	3,188,147 3/	1,307,908	1,056,557	517,417	190,948	66,236	49,081
ALL AGES	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 20 years	10.9	20.8	5.9	2.0	0.7	0.2	0.1
20-24 years	25.5	30.6	26.0	19.5	14.1	9.3	3.5
25-29 years	30.1	27.8	32.8	32.3	30.3	27.0	17.0
30-34 years	23.3	15.3	25.7	31.7	34.4	35.7	34.6
35-39 years	8.8	4.8	8.5	12.7	17.3	22.6	32.3
40-49 years	1.4	0.7	1.1	1.8	3.2	5.2	12.5

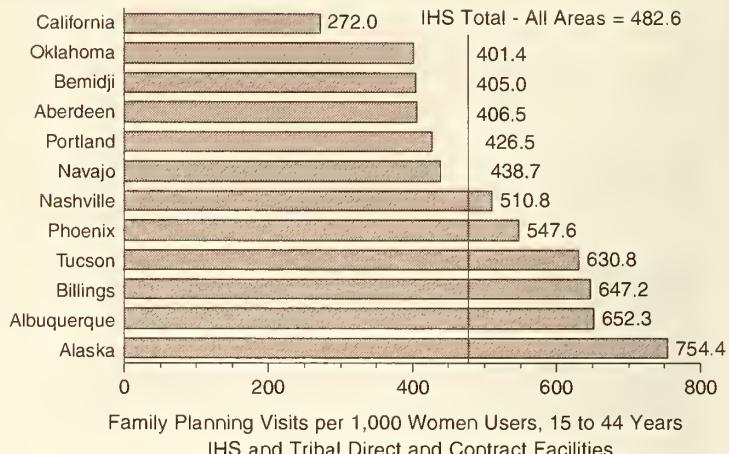
1/ Excludes 387 American Indian and Alaska Native births (0.4 percent) with birth order not reported.

2/ Excludes 18,455 U.S. All Races births (0.5 percent) with birth order not reported.

3/ Excludes 13,531 U.S. White births (0.4 percent) with birth order not reported.

## ► Chart 6. Family Planning Visit Rates, FY 1994

Indian women of childbearing age (15 to 44 years) have family planning visits to IHS and Tribal direct and contract facilities at a rate of 482.6 visits per 1,000 women (15 to 44 years). The rate varies considerably by IHS Area, ranging from 272.0 in California to 754.4 in Alaska.



**Table 6. Number and Rate of Family Planning Visits**

Indian Health Service and Tribal Direct and Contract Facilities, FY 1994

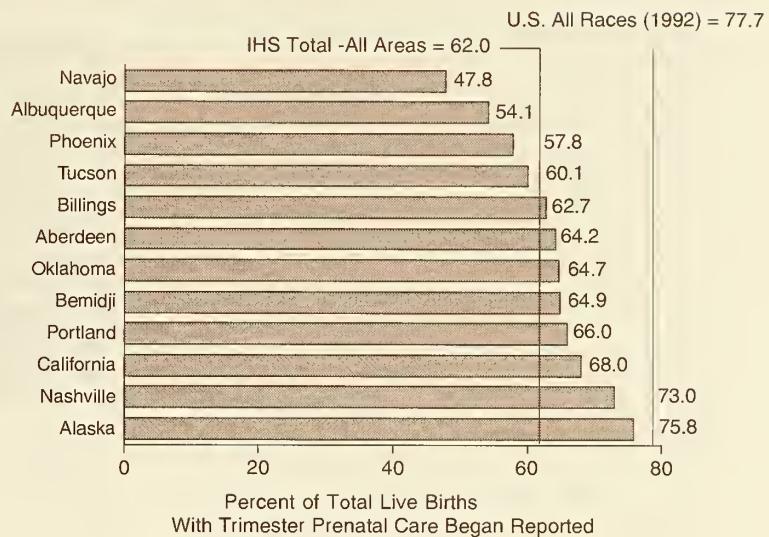
	Total Visit Rate 1/	Total Visits	Direct Visits	Contract Visits	Women 15 to 44 Years
All IHS Areas	482.6	147,355	145,787	1,568	305,361
Aberdeen	406.5	10,512	10,462	50	25,857
Alaska	754.4	18,241	18,238	3	24,178
Albuquerque	652.3	13,696	13,640	56	20,998
Bemidji	405.0	6,467	6,440	27	15,966
Billings	647.2	9,630	9,329	301	14,880
California	272.0	4,342	4,334	8	15,962
Nashville	510.8	4,576	4,481	95	8,958
Navajo	438.7	24,385	23,584	801	55,583
Oklahoma	401.4	27,239	27,223	16	67,854
Phoenix	547.6	16,519	16,485	34	30,164
Portland	426.5	8,345	8,182	163	19,566
Tucson	630.8	3,403	3,389	14	5,395

1/ Number of family planning visits per 1,000 women of childbearing age (15 to 44 years) in the IHS user population.

SOURCES: IHS Direct: APC Data System (Report 1A)  
IHS Contract: Contract Statistical System (Report 3G)  
Tribal Direct and Contract: Area Submissions

► **Chart 7. Live Births with Prenatal Care Beginning in First Trimester, Calendar Years 1991-1993**

Indian women generally begin prenatal care later than women in the U.S. All Races population. Prenatal care begins in the first trimester for 62.0 percent of Indian live births, whereas this percentage for the general population is 77.7. None of the IHS Areas reach the U.S. All Races rate, although Alaska is close at 75.8. The Navajo rate of 47.8, the lowest Area rate, is only 62 percent of the All Races rate.



**Table 7. Live Births with Prenatal Care Beginning in First Trimester, Calendar Years 1991-1993**

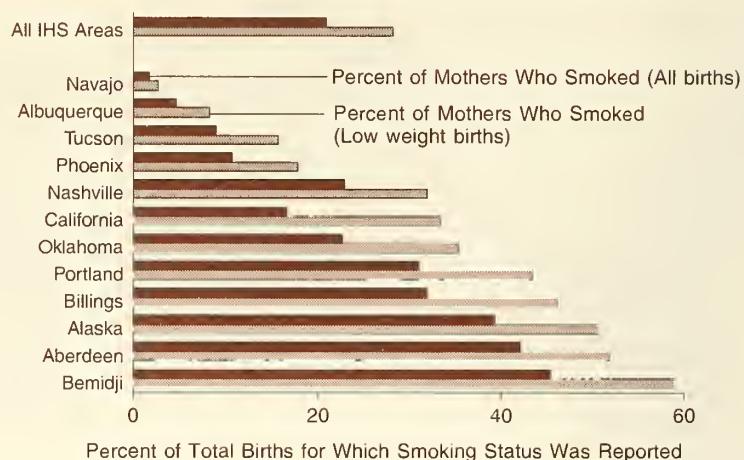
	Total Live Births 1/	Live Births With Trimester Prenatal Care Began Reported	Live Births With Prenatal Care Beginning in the First Trimester 2/ Number	Live Births With Prenatal Care Beginning in the First Trimester 2/ Percent
U.S. All Races (1992)	4,065,014	3,976,509	3,091,543	77.7
All IHS Areas	101,406	99,064	61,453	62.0
Aberdeen	8,465	8,374	5,376	64.2
Alaska	8,807	8,679	6,576	75.8
Albuquerque	5,707	5,492	2,973	54.1
Bemidji	5,355	5,244	3,401	64.9
Billings	4,467	4,438	2,781	62.7
California	7,700	7,630	5,192	68.0
Nashville	3,528	3,469	2,533	73.0
Navajo	16,887	16,626	7,947	47.8
Oklahoma	18,809	18,114	11,728	64.7
Phoenix	10,197	9,874	5,705	57.8
Portland	9,783	9,433	6,225	66.0
Tucson	1,701	1,691	1,016	60.1

1/ Includes 88,505 U.S. All Races live births and 2,342 American Indian/Alaska Native live births for which trimester of pregnancy that prenatal care began was not reported on the State birth certificate.

2/ Percent based on live births with this information reported.

► **Chart 8. Percent of Mothers Who Smoked During Pregnancy for All Births and Low Birth Weight Births**

In the Indian population, 21.0 percent of women report that they smoke during pregnancy. Women in the U.S. All Races population smoke at a lower rate during pregnancy, i.e., 16.9 percent. There appears to be a relationship between smoking and low birth weight births. Of all Indian low weight births, 28.2 percent are to women who report smoking during pregnancy. There are regional variations among the IHS Areas in terms of the rate of smoking during pregnancy. Higher rates of smoking are associated with the IHS Areas in the northern segment of the country, excluding the East Coast. The rates for Bemidji, Aberdeen, Alaska, Billings, and Portland reach a high of 45.4 percent and a low of 31.0 percent. For the other IHS Areas, the rates range from 1.7 percent in Navajo to 23.0 percent in Nashville.



► **Table 8. Percent of Mothers Who Smoked During Pregnancy for All Births and Low Birth Weight Births by Age of Mother**

IHS Service Area, 1991-1993, and U.S. All Races Population, 1992  
(Low birthweight is defined as weight less than 2,500 grams (5lb, 8oz))

**Percent of Live Births 1/ for Which the Mother Reported Smoking**

IHS Area of Residence of the Mother	All Ages	Under 15 Years	15-19 Years	20-34 Years	35-49 Years
U.S. All Races (1992)	16.9	6.9	18.6	17.1	13.2
All IHS Areas	21.0	14.3	21.8	21.1	17.6
Aberdeen	42.1	31.6 *	38.5	43.6	39.4
Alaska	39.3	31.8	43.1	38.8	37.1
Albuquerque	4.6	—	4.1	4.9	3.1
Bemidji	45.4	38.9 *	48.2	44.8	42.3
Billings	31.9	16.7 *	26.4	33.5	33.6
California	16.7	100.0 *	15.4 *	14.3	18.2
Nashville	23.0	—	20.9	23.9	21.7
Navajo	1.7	—	2.2	1.7	0.7
Oklahoma	22.7	11.6	20.1	23.3	19.1
Phoenix	10.7	9.6	11.2	10.7	9.5
Portland	31.0	19.1	34.2	30.3	28.7
Tucson	8.9	—	7.8	9.4	8.1

**Percent of Low Weight Births 1/ for Which the Mother Reported Smoking**

IHS Area of Residence of the Mother	All Ages	Under 15 Years	15-19 Years	20-34 Years	35-49 Years
U.S. All Races (1992)	26.9	6.8	21.3	28.4	26.6
All IHS Areas	28.2	18.2	25.4	29.8	22.3
Aberdeen	51.8	100.0 *	44.4	53.4	52.4
Alaska	50.6	—	47.4	53.1	38.3
Albuquerque	8.2	—	2.7	10.2	5.3
Bemidji	58.9	100.0 *	51.5	59.9	78.6 *
Billings	46.1	—	30.6	52.7	22.2 *
California	33.3 *	—	—	60.0 *	—
Nashville	32.0	—	11.1	37.3	30.0 *
Navajo	2.6	—	1.8	3.1	0.8
Oklahoma	35.3	—	30.0	37.6	28.3
Phoenix	17.8	—	21.9	17.2	15.3
Portland	43.4	33.3 *	38.9	44.4	50.0
Tucson	15.7	—	4.3	17.5	27.3 *

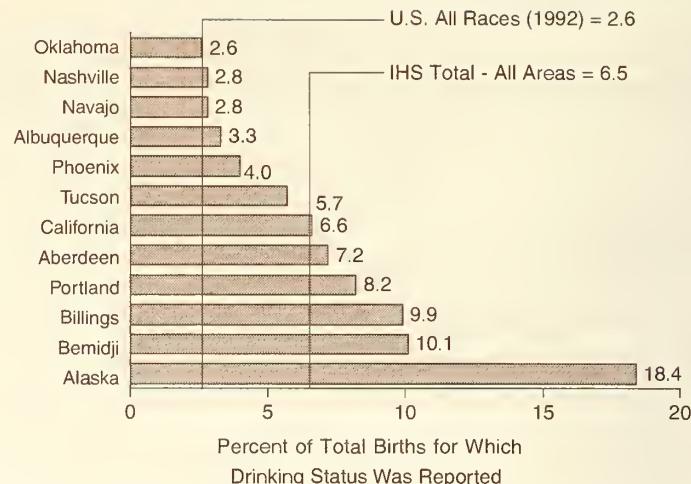
\* Percent based on less than 20 births in the age group specified.

1/ Based on the number of live births with smoking status of the mother reported.

NOTE: The States of California, Indiana, New York and South Dakota, do not include a question on smoking history of the mother during pregnancy. Persons usually residing in one of these 4 States responding to this question reported their smoking history on a form from another State since the delivery was performed out of their usual State of residence.

## ► Chart 9. Percent of Mothers Who Drank During Pregnancy

Indian women report that they consume alcohol during pregnancy at a rate 2.5 times the rate for women in the U.S. All Races population. That is, 6.5 percent of Indian mothers are reported to have drank on the birth certificate compared to 2.6 percent for All Races mothers. The highest rate among the IHS Areas occurs in Alaska, where 18.4 percent of mothers report drinking during pregnancy. This is almost double the rate for the next highest Area (Bemidji at 10.1 percent) and over 7 times the lowest Area rate (2.6 percent in Oklahoma, the same as the All Races rate).



**Table 9. Percent of Mothers Who Drank During Pregnancy 1/ by Age of Mother**

IHS Service Area, 1991-1993, and U.S. All Races Population, 1992  
(Mothers who drank during pregnancy include those that drank even less than one drink per week during pregnancy.)

IHS Area of Residence of the Mother	Percent of Live Births 1/ for Which the Mother Reported Drinking						
	All Ages	Under 18 Years	18-19 Years	20-24 Years	25-29 Years	30-34 Years	35-49 Years
U.S. All Races (1992)	2.6	1.1	1.5	2.0	2.6	3.4	3.9
All IHS Areas	6.5	5.4	5.1	6.0	7.2	7.7	7.6
Aberdeen	7.2	5.5	5.5	7.0	8.3	8.7	8.2
Alaska	18.4	16.6	15.6	16.4	20.1	20.2	20.8
Albuquerque	3.3	2.7	2.7	2.6	3.9	4.9	2.5
Bemidji	10.1	5.9	9.3	10.4	11.9	10.9	6.8
Billings	9.9	8.2	7.4	9.5	12.0	11.2	10.0
California	6.6	14.3*	—	6.7*	6.3*	—	9.1*
Nashville	2.8	2.0	1.8	2.6	3.6	3.1	4.6
Navajo	2.8	2.7	2.6	2.9	2.5	3.1	2.6
Oklahoma	2.6	1.6	2.1	2.6	2.7	3.3	3.8
Phoenix	4.0	7.2	5.6	6.1	7.0	8.4	7.7
Portland	8.2	6.8	5.3	7.9	9.0	9.0	13.7
Tucson	5.7	4.2	2.8	6.1	6.3	6.5	6.8

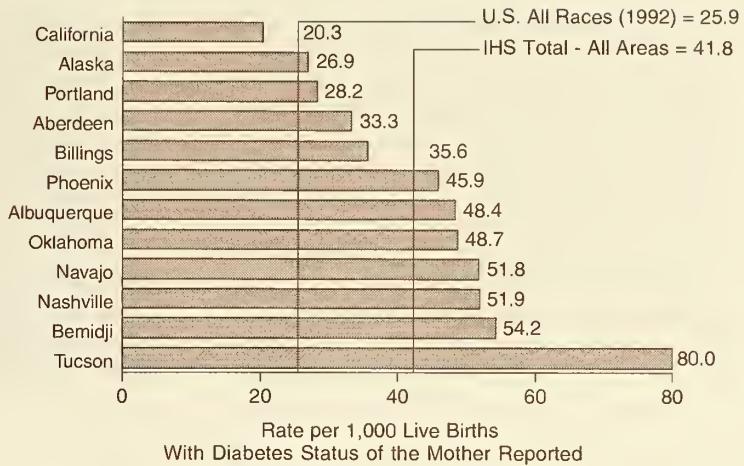
\* Percent based on less than 20 births in the age group specified.

1/ Based on the number of live births with drinking status of the mother reported.

NOTE: The States of California, New York and South Dakota, do not include a question on drinking history of the mother during pregnancy. Persons usually residing in one of these 3 States responding to this question reported their drinking history on a form from another State, since the delivery was performed out of their usual State of residence.

### ► Chart 10. Rate of Live Births with Diabetic Mother

Indian women giving birth are more likely to be diabetic (medical risk factor of diabetes is reported on the birth certificate) than their counterparts in the U.S. All Races population. For the Indian population, there are 41.8 births with a diabetic mother per 1,000 live births. This is 61 percent greater than the All Races rate of 25.9. The Tucson Area rate (80.0) is extremely high. Other high rates (over 50.0) occur in Bemidji, Nashville, and Navajo. The lowest rates (under 30.0) occur in California, Alaska, and Portland.



**Table 10. Rate 1/ of Live Births with Diabetic Mother by Age of Mother**

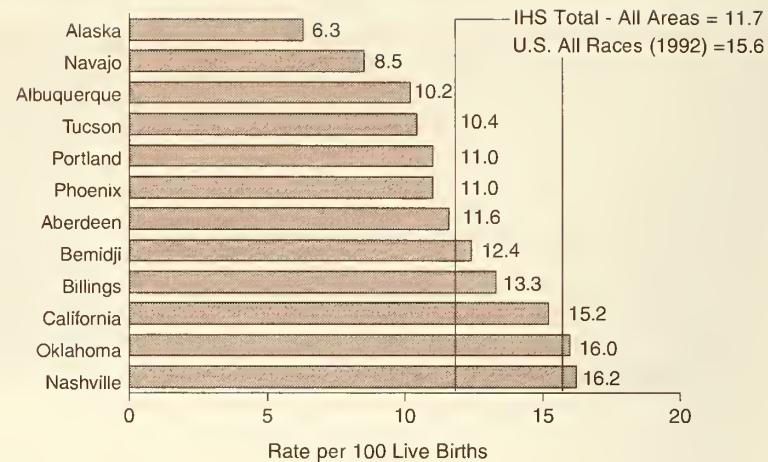
IHS Service Area, 1991-1993, and U.S. All Races Population, 1992

IHS Area of Residence of the Mother	All Ages	Under 20 Years	20-24 Years	25-29 Years	30-34 Years	35-39 Years	40-49 Years
U.S. All Races (1992)	25.9	8.9	16.4	25.6	35.3	50.6	69.6
All IHS Areas	41.8	12.0	24.9	45.5	73.5	119.0	143.1
Aberdeen	33.3	10.0	14.6	43.1	70.9	113.1	144.3
Alaska	26.9	8.0	19.5	22.7	48.0	61.3	27.0
Albuquerque	48.4	8.9	24.1	40.7	93.9	160.9	129.9
Bemidji	54.2	12.2	37.7	64.7	98.6	184.0	171.4
Billings	35.6	10.8	16.5	41.0	77.6	116.7	157.9
California	20.3	6.9	10.6	28.8	30.0	47.0	65.2
Nashville	51.9	14.1	33.8	69.8	87.9	114.9	266.7
Navajo	51.8	11.0	23.1	47.7	88.3	133.0	189.3
Oklahoma	48.7	18.7	35.3	56.3	88.6	148.7	215.0
Phoenix	45.9	12.4	25.4	48.4	80.4	141.7	165.0
Portland	28.2	9.9	21.0	35.4	41.3	72.7	59.4
Tucson	80.0	18.4	49.5	94.7	128.8	214.3	318.2

1/ Number of live births with a diabetic mother per 1,000 live births with diabetes status reported in age group specified.

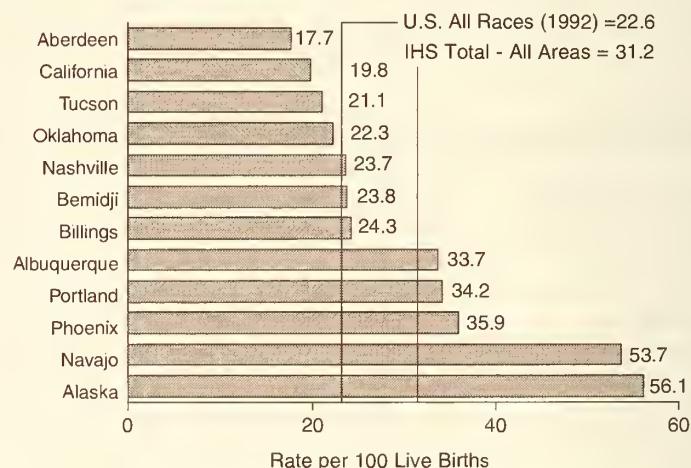
### ► Chart 11.1 Rate of First Cesarian Delivery

Indian women on average have a lower rate of cesarean deliveries than women in the U.S. All Races population. The Indian rate of primary cesarean deliveries (11.7 first cesarean deliveries per 100 live births to women who have not had a prior cesarean delivery) is 25 percent less than the All Races rate, 15.6. Only two IHS Areas exceed the All Races rate, Oklahoma (16.3) and Nashville (16.2). The two lowest rates occur in the Alaska (6.3) and Navajo (7.8) Areas.



### Chart 11.2 Rate of Vaginal Births After Previous Cesarean Delivery

Indian women who have had a cesarean delivery are 38 percent more likely to have a subsequent vaginal delivery than women in the U.S. All Races population. The Indian rate is 31.2 vaginal births per 100 live births to women with a prior cesarean delivery compared to an All Races rate of 22.6. In the Alaska (56.1) and Navajo (53.7) IHS Areas, the rate exceeds 50.0. It is below 20.0 in the Aberdeen (17.7) and California (19.8) Areas.



► **Table 11. Rates of First Cesarian Delivery and Vaginal Births after Previous Cesarian Delivery by Age of Mother**

IHS Service Area, 1991-1993, and U.S. All Races, 1992  
(Rates per 100 live births)

IHS Area of Residence of the Mother	Rate of First Cesarian Delivery			
	All Ages	Under 25 Years	25-34 Years	35-49 Years
U.S. All Races (1992)	15.6	14.4	15.9	16.1
All IHS Areas	11.7	11.6	11.2	15.0
Aberdeen	11.6	11.0	12.0	14.2
Alaska	6.3	6.1	6.5	7.0
Albuquerque	10.2	9.1	11.1	12.7
Bemidji	12.4	11.9	12.3	18.0
Billings	13.3	12.9	12.7	20.9
California	15.2	14.2	15.8	19.0
Nashville	16.2	16.6	15.2	18.5
Navajo	8.5	8.8	7.4	11.5
Oklahoma	16.0	15.6	16.6	23.5
Phoenix	11.0	11.1	10.0	16.0
Portland	11.0	10.6	10.6	17.4
Tucson	10.4	10.4	8.6	19.2

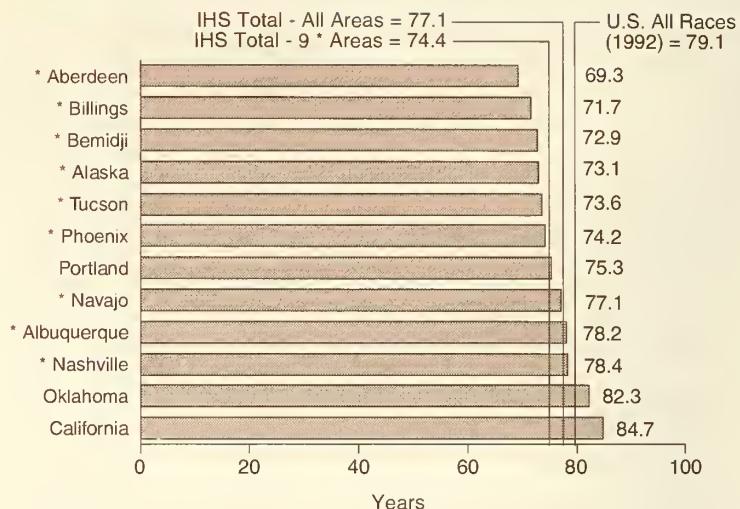
IHS Area of Residence of the Mother	Rate of Vaginal Births After Previous Cesarian Delivery			
	All Ages	Under 25 Years	25-34 Years	35-49 Years
U.S. All Races (1992)	22.6	24.4	22.6	19.8
All IHS Areas	31.2	31.1	31.9	27.6
Aberdeen	17.7	18.6	18.6	7.6
Alaska	56.1	54.5	59.6	46.4
Albuquerque	33.7	37.7	33.5	23.9
Bemidji	23.8	23.5	25.1	14.3
Billings	24.3	23.4	24.9	25.6
California	19.8	18.0	20.3	22.4
Nashville	23.7	27.3	20.3	24.0
Navajo	53.7	58.7	54.0	44.3
Oklahoma	22.3	23.2	22.4	16.3
Phoenix	35.9	39.4	37.0	18.4
Portland	34.2	38.5	31.6	31.2
Tucson	21.1	22.5	23.0	14.3

NOTE: Rate of first cesarean delivery is computed by dividing the total number of such deliveries by the number of all women who have never had a cesarean delivery. The denominator for this rate includes all births less those with method of delivery classified as repeat cesarean, vaginal birth after previous cesarean, or method not stated.

Rate of vaginal births after previous cesarean delivery is computed by dividing the total number of such deliveries by the sum of these deliveries plus repeat cesarean deliveries, that is, to women with a previous cesarean section.

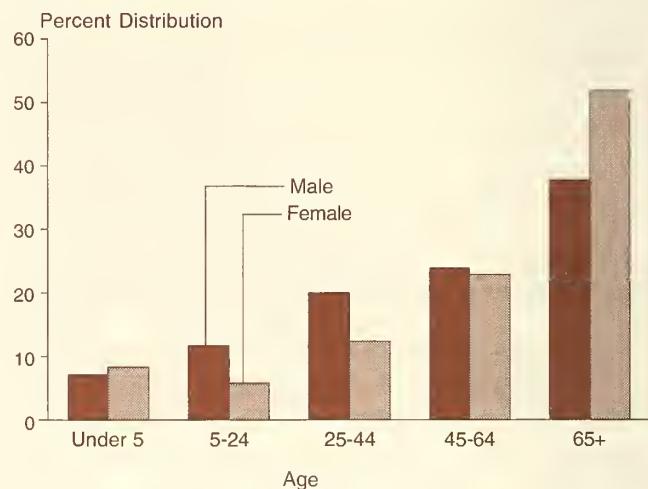
### ► Chart 12. Life Expectancy at Birth, Females, Calendar Years 1991-1993

The life expectancy for Indian females is 7.8 years greater than it is for Indian males, i.e., 77.1 compared to 69.3. Indian females are approaching the life expectancy of U.S. All Races females, which is 79.1. The Aberdeen Area has the lowest life expectancy (69.3) among the IHS Areas. The life expectancies shown for the California and Oklahoma Areas are considered artificially high because of under reporting of Indian race on death certificates.



### Chart 13. Deaths by Age and Sex, Indians and Alaska Natives (1991-1993)

Indian females die at relatively older ages than Indian males. The percentage of deaths pertaining to ages under 45 is 23 percent for Indian females and 35 for males. However, for ages over 64, the female percentage is 54 compared to the male percentage of 40.



► **Table 13. Number and Percent Distribution of Deaths by Age and Sex**

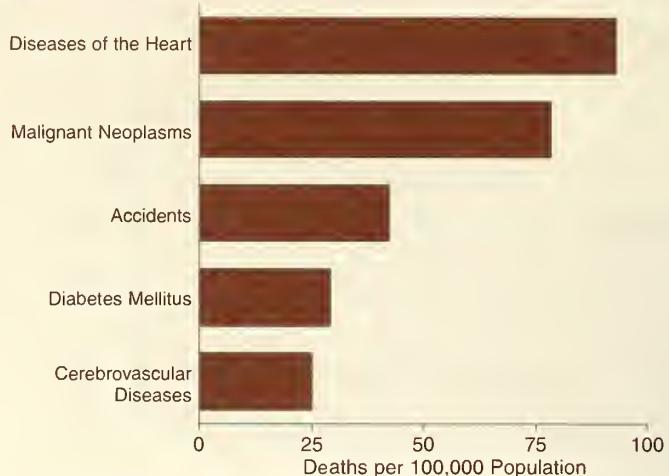
American Indians and Alaska Natives, IHS Service Area, 1991-1993, and Selected U.S. Populations, 1992

Age Group	American Indians and Alaska Natives					
	Both Sexes		Male		Female	
	Number	Percent	Number	Percent	Number	Percent
All Ages	20,229	100.0	11,686	100.0	8,543	100.0
Under 1	895	4.4	484	4.1	411	4.8
1 to 4	271	1.3	154	1.3	117	1.4
5 to 14	267	1.3	178	1.5	89	1.0
15 to 24	1,182	5.8	877	7.5	305	3.6
25 to 34	1,606	7.9	1,172	10.0	434	5.1
35 to 44	1,796	8.9	1,215	10.4	581	6.8
45 to 54	1,972	9.7	1,224	10.5	748	8.8
55 to 64	2,936	14.5	1,706	14.6	1,230	14.4
65 to 74	3,614	17.9	1,955	16.7	1,659	19.4
75 to 84	3,451	17.1	1,756	15.0	1,695	19.8
85 and over	2,227	11.0	956	8.2	1,271	14.9
Age Not Stated	12	0.1	9	0.1	3	0.0
United States						
Age Group	All Races		White		Black	
Number of Deaths, All Ages	2,175,613		1,873,781		269,219	
Percent Distribution, All Ages	100.0		100.0		100.0	
Under 1	1.6		1.2		4.2	
1 to 4	0.3		0.3		0.7	
5 to 14	0.4		0.3		0.7	
15 to 24	1.6		1.3		3.3	
25 to 34	2.7		2.2		5.7	
35 to 44	4.2		3.5		8.6	
45 to 54	5.7		5.2		9.3	
55 to 64	11.1		10.6		14.3	
65 to 74	22.0		22.1		20.9	
75 to 84	28.0		29.3		19.7	
85 and over	22.4		24.0		12.6	
Age Not Stated	0.0		0.0		0.0	

NOTE: 0.0 Rounds to zero.

► **Chart 14. Mortality Rates for Leading Causes: Females, Indians and Alaska Natives (1991-1993)**

The two leading causes of death for Indian females are diseases of the heart and malignant neoplasms. The same is true for U.S. All Races and White females. Diseases of the heart is also the leading cause of death for Indian males, but accidents is the second leading cause and malignant neoplasms is third. For Indian females, accidents is third.



**Table 14. Leading Causes of Death by Sex**

American Indians and Alaska Natives, IHS Service Area, 1991-1993  
Rate per 100,000 Population

**MALE**

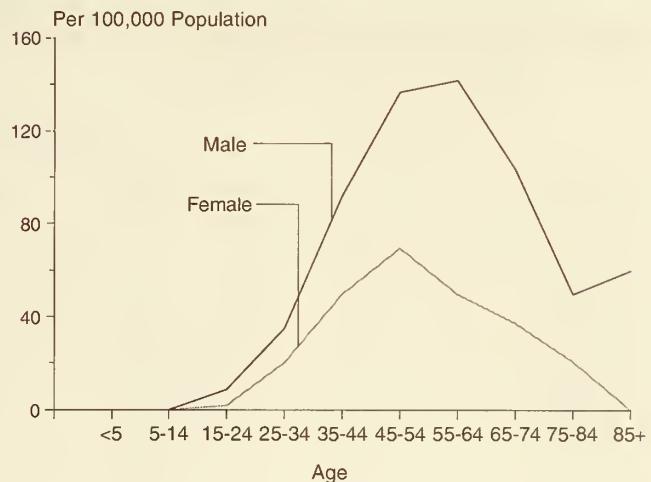
Cause of Death and ICD-9 Code(s)	Number	Rate
All Causes	11,686	622.6
Diseases of the heart, 390-398, 402, 404-429	2,627	140.0
Accidents, E800-E949	2,152	114.7
Motor vehicle, E810-E825	1,142	60.8
Other accidents, E800-E807, E826-E949	1,010	53.8
Malignant neoplasms, 140-208	1,555	82.9
Chronic liver disease and cirrhosis, 571	503	26.8
Suicide, E950-E959	480	25.6
Pneumonia and influenza, 480-487	429	22.9
Homicide and legal intervention, E960-E978	411	21.9
Cerebrovascular diseases, 430-438	403	21.5
Diabetes mellitus, 250	388	20.7
Chronic obstructive pulmonary diseases and allied conditions, 490-496	261	13.9
All other causes	2,477	

**FEMALE**

Cause of Death and ICD-9 Code(s)	Number	Rate
All Causes	8,543	441.5
Diseases of the heart, 390-398, 402, 404-429	1,797	92.9
Malignant neoplasms, 140-208	1,517	78.4
Accidents, E800-E949	820	42.4
Motor vehicle, E810-E825	522	27.0
Other accidents, E800-E807, E826-E949	298	15.4
Diabetes mellitus, 250	565	29.2
Cerebrovascular diseases, 430-438	484	25.0
Chronic liver disease and cirrhosis, 571	396	20.5
Pneumonia and influenza, 480-487	314	16.2
Chronic obstructive pulmonary diseases and allied conditions, 490-496	227	11.7
Nephritis, nephrotic syndrome, and nephrosis, 580-589	147	7.6
Congenital anomalies, 740-759	133	6.9
All other causes	2,143	

#### ► Chart 15. Alcoholism Death Rates by Age and Sex, Indians and Alaska Natives (1991-1993)

Although alcohol abuse is a more serious problem for Indian males than females, it still takes a considerable death toll among Indian females. The Indian female alcoholism death rate for age groups 35 through 74 ranges from 37 to 69 deaths per 100,000 population. For U.S. All Races females, the rate only reaches double digits for one age group, i.e., 10.1 for 55 to 64 year old women. The age-specific rates for U.S. White females do not exceed a single digit.



► **Table 15. Alcoholism 1/ Mortality Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1991-1993, and U.S. All Races and White Populations, 1992  
Rate per 100,000 Population

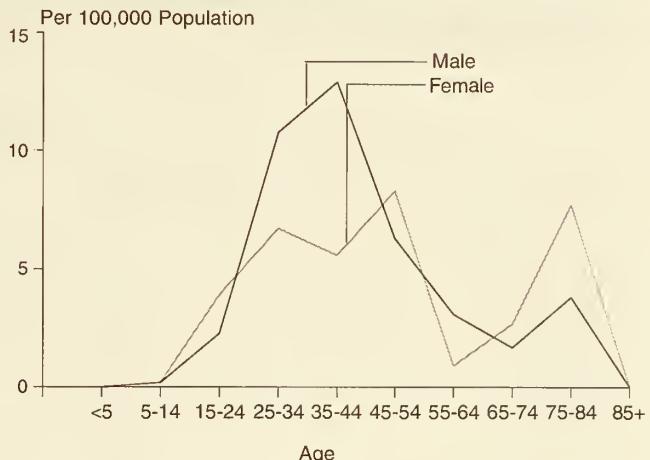
Indian and Alaska Native			
Age Group	Both Sexes	Male	Female
Under 5 years	—	—	—
5-14 years	0.0	0.0	0.0
15-24 years	5.2	8.4	1.8
25-34 years	27.5	34.9	20.3
35-44 years	70.3	92.2	49.7
45-54 years	101.7	137.0	69.4
55-64 years	92.6	142.2	49.5
65-74 years	66.7	103.8	37.2
75-84 years	32.2	49.5	20.6
85 years +	21.9	59.8	0.0
U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 5 years	0.0	0.0	—
5-14 years	—	—	—
15-24 years	0.3	0.4	0.1
25-34 years	2.5	3.5	1.4
35-44 years	10.2	16.0	4.6
45-54 years	16.6	26.3	7.3
55-64 years	22.9	37.1	10.1
65-74 years	19.2	32.8	8.5
75-84 years	10.8	20.9	4.6
85 years +	5.4	12.5	2.6
U.S. White			
Age Group	Both Sexes	Male	Female
Under 5 years	0.0	0.0	—
5-14 years	—	—	—
15-24 years	0.3	0.4	0.1
25-34 years	2.2	3.2	1.1
35-44 years	8.8	14.1	3.6
45-54 years	14.2	22.5	6.1
55-64 years	20.8	33.7	9.0
65-74 years	17.9	30.5	7.9
75-84 years	10.4	20.2	4.4
85 years +	5.0	11.9	2.4

1/ Includes deaths with ICD-9 codes 291, 303, 305.0, 357.5, 425.5, 535.3, 571.0-571.3, 790.3 and E860

NOTE: — Represents zero. 0.0 Rounds to zero.

► **Chart 16. Drug-Related Death Rates by Age and Sex, Indians and Alaska Natives (1991-1993)**

Age-specific drug-related death rates for Indian females are equal to or greater than those for Indian males except for age groups 25 to 44 and 55 to 64 years. However, some of these rates are based on small numbers and should be interpreted with caution. The highest female rate (8.3) occurs among the 45 to 54 year age group. Indian female age-specific rates are generally higher than those for U.S. All Races and White females.



► **Table 16. Drug-Related 1/ Mortality Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1991-1993, and U.S. All Races and White Populations, 1992  
Rate per 100,000 Population

Age Group	Both Sexes	Indian and Alaska Native	
		Male	Female
Under 5 years	—	—	—
5-14 years	0.2	0.2	0.2
15-24 years	3.1	2.3	3.9
25-34 years	8.7	10.8	6.7
35-44 years	9.1	12.9	5.6
45-54 years	7.3	6.3	8.3
55-64 years	1.9	3.1	0.9
65-74 years	2.2	1.7	2.7
75-84 years	6.1	3.8	7.7
85 years +	0.0	0.0	0.0

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 5 years	0.2	0.3	0.2
5-14 years	0.1	0.1	0.1
15-24 years	2.2	2.9	1.6
25-34 years	7.6	10.9	4.2
35-44 years	10.8	16.0	5.7
45-54 years	5.8	7.3	4.4
55-64 years	3.2	3.4	3.0
65-74 years	2.7	2.5	2.8
75-84 years	3.4	3.7	3.2
85 years +	5.6	7.0	5.0

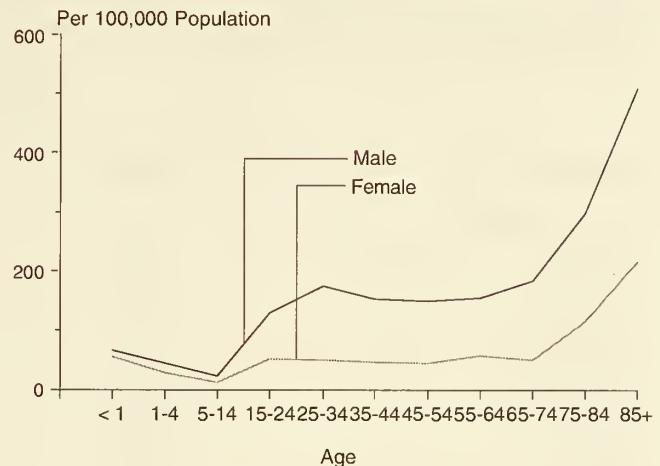
U.S. White			
Age Group	Both Sexes	Male	Female
Under 5 years	0.2	0.2	0.1
5-14 years	0.1	0.1	0.1
15-24 years	2.3	2.9	1.6
25-34 years	7.3	10.6	4.0
35-44 years	9.9	14.6	5.2
45-54 years	5.3	6.1	4.6
55-64 years	3.2	3.1	3.3
65-74 years	2.7	2.4	2.9
75-84 years	3.4	3.7	3.3
85 years +	5.7	7.2	5.1

1/ Includes deaths with ICD-9 codes 292, 304, 305.2 to 305.9, E962.0, E850-E858, E950.0-E950.5, and E980.0-E980.5.

NOTE: — Represents zero. 0.0 Rounds to zero.

### ► Chart 17. Accident Death Rates by Age and Sex, Indians and Alaska Natives (1991-1993)

The age-specific death rate for accidents for Indian females is lower for all age groups in comparison with Indian males. However, when compared to U.S. All Races and White females, the Indian female rate is higher for all age groups except 85 years and older. The Indian female rate exceeds 40 deaths per 100,000 population for age groups under 1 and over 14 years.



► **Table 17. Accident 1/ Mortality Rates by Age and Sex**

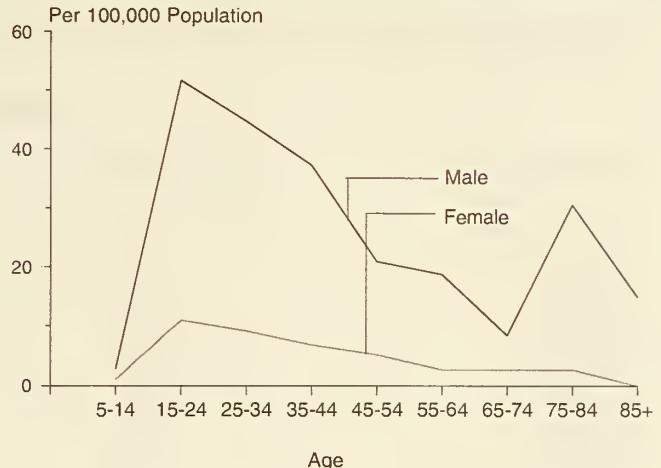
American Indians and Alaska Natives, IHS Service Area, 1991-1993, and U.S. All Races and White Populations, 1992  
Rate per 100,000 Population

<b>Indian and Alaska Native</b>			
<b>Age Group</b>	<b>Both Sexes</b>	<b>Male</b>	<b>Female</b>
Under 1 year	61.7	67.0	56.3
1-4 years	37.2	45.3	28.8
5-14 years	17.1	22.7	11.4
15-24 years	91.9	129.8	52.5
25-34 years	110.4	174.1	49.5
35-44 years	98.5	153.2	47.3
45-54 years	94.8	150.3	44.0
55-64 years	102.2	154.6	56.7
65-74 years	108.9	184.2	49.2
75-84 years	188.8	297.3	115.7
85 years +	323.5	508.4	216.5
<b>U.S. All Races</b>			
<b>Age Group</b>	<b>Both Sexes</b>	<b>Male</b>	<b>Female</b>
Under 1 year	20.5	22.7	18.2
1-4 years	15.9	19.1	12.6
5-14 years	9.3	12.2	6.2
15-24 years	37.8	55.5	19.3
25-34 years	32.5	50.6	14.4
35-44 years	30.1	46.7	13.8
45-54 years	27.3	41.0	14.2
55-64 years	30.6	44.8	17.8
65-74 years	44.2	61.1	31.0
75-84 years	96.3	130.8	75.3
85 years +	254.8	344.3	220.2
<b>U.S. White</b>			
<b>Age Group</b>	<b>Both Sexes</b>	<b>Male</b>	<b>Female</b>
Under 1 year	16.9	19.8	13.8
1-4 years	14.6	18.0	11.0
5-14 years	8.6	11.2	5.8
15-24 years	39.4	57.3	20.5
25-34 years	32.3	50.3	14.0
35-44 years	28.6	44.3	12.9
45-54 years	25.5	37.8	13.6
55-64 years	28.5	41.0	16.9
65-74 years	42.9	58.4	30.5
75-84 years	95.6	129.2	74.9
85 years +	259.3	348.7	225.2

1/ Includes deaths with ICD-9 code E800-E949.

► **Chart 18. Suicide Death Rates by Age and Sex, Indians and Alaska Natives (1991-1993)**

Indian males are much more likely to die from suicide than Indian females. However, Indian female suicide rates are greater than those for U.S. All Races females for age groups under 45 years and for White females for age groups under 35 years. For older age groups, the Indian female rates are lower.



► **Table 18. Suicide 1/ Mortality Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1991-1993, and U.S. All Races and White Populations, 1992  
Rate per 100,000 Population

<b>Indian and Alaska Native</b>			
<b>Age Group</b>	<b>Both Sexes</b>	<b>Male</b>	<b>Female</b>
Under 5 years	—	—	—
5-14 years	1.9	2.9	1.0
15-24 years	31.7	51.7	10.9
25-34 years	26.6	44.8	9.1
35-44 years	21.6	37.3	6.8
45-54 years	12.6	20.9	5.1
55-64 years	10.1	18.7	2.7
65-74 years	5.2	8.4	2.7
75-84 years	13.8	30.5	2.6
85 years +	5.5	15.0	0.0

<b>U.S. All Races</b>			
<b>Age Group</b>	<b>Both Sexes</b>	<b>Male</b>	<b>Female</b>
Under 5 years	—	—	—
5-14 years	0.9	1.2	0.5
15-24 years	13.0	21.9	3.7
25-34 years	14.5	24.0	5.0
35-44 years	15.1	23.7	6.6
45-54 years	14.7	22.4	7.3
55-64 years	14.8	24.1	6.5
65-74 years	16.5	29.9	5.9
75-84 years	22.8	50.0	6.2
85 years +	21.9	62.8	6.1

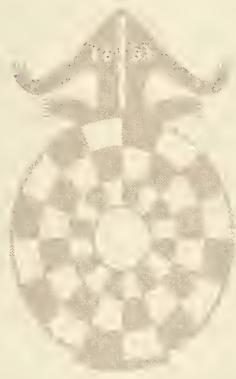
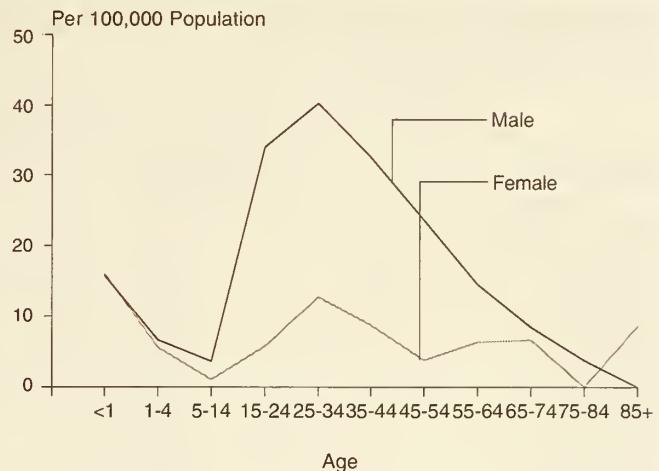
<b>U.S. White</b>			
<b>Age Group</b>	<b>Both Sexes</b>	<b>Male</b>	<b>Female</b>
Under 5 years	—	—	—
5-14 years	0.9	1.3	0.5
15-24 years	13.5	22.7	3.8
25-34 years	15.3	25.1	5.4
35-44 years	16.2	25.2	7.2
45-54 years	15.8	24.0	7.9
55-64 years	16.2	26.0	7.2
65-74 years	17.7	32.0	6.3
75-84 years	24.2	53.0	6.6
85 years +	23.2	67.6	6.3

1/ Includes deaths with ICD-9 code E950-E959.

NOTE: — Represents zero. 0.0 Rounds to zero.

► **Chart 19. Homicide Death Rates by Age and Sex, Indians and Alaska Natives (1991-1993)**

The age-specific homicide death rate for Indian females is lower for all age groups except under 1 and 85 years and older in comparison with Indian males. However, the Indian female rate is greater than the rate for U.S. All Races females for all age groups except 5 to 24 and 75 to 84 years. It exceeds the rate for U.S. White females for all age groups except 75 to 84 years.



► **Table 19. Homicide 1/ Mortality Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1991-1993, and U.S. All Races and White Populations, 1992  
Rate per 100,000 Population

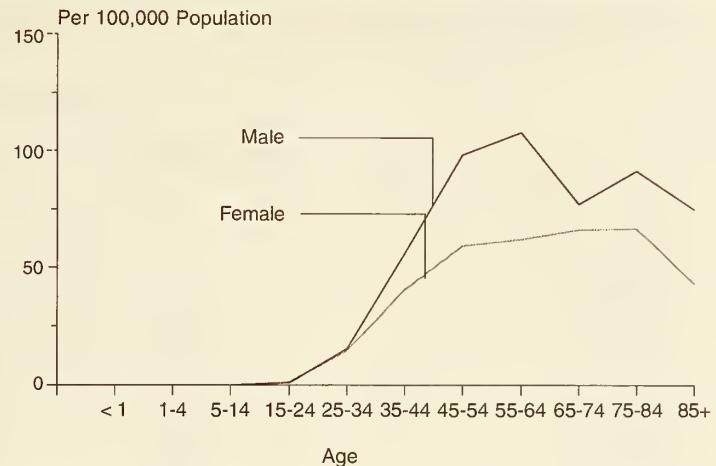
<b>Indian and Alaska Native</b>			
<b>Age Group</b>	<b>Both Sexes</b>	<b>Male</b>	<b>Female</b>
Under 1 year	15.9	15.8	16.1
1-4 years	6.1	6.6	5.6
5-14 years	2.3	3.6	1.0
15-24 years	20.1	34.0	5.7
25-34 years	26.2	40.3	12.8
35-44 years	20.3	32.6	8.8
45-54 years	13.3	23.7	3.8
55-64 years	10.1	14.5	6.3
65-74 years	7.4	8.4	6.6
75-84 years	1.5	3.8	0.0
85 years +	5.5	0.0	8.7
<b>U.S. All Races</b>			
<b>Age Group</b>	<b>Both Sexes</b>	<b>Male</b>	<b>Female</b>
Under 1 year	8.1	8.9	7.4
1-4 years	2.8	3.0	2.5
5-14 years	1.6	2.0	1.2
15-24 years	22.2	37.3	6.4
25-34 years	17.3	27.5	7.1
35-44 years	11.2	17.6	4.9
45-54 years	7.5	11.8	3.3
55-64 years	4.7	7.7	2.0
65-74 years	3.7	5.5	2.4
75-84 years	3.8	5.3	2.9
85 years +	4.1	7.3	2.9
<b>U.S. White</b>			
<b>Age Group</b>	<b>Both Sexes</b>	<b>Male</b>	<b>Female</b>
Under 1 year	6.0	6.4	5.5
1-4 years	1.8	2.1	1.5
5-14 years	1.0	1.2	0.8
15-24 years	10.9	17.5	4.1
25-34 years	9.7	15.1	4.2
35-44 years	7.2	10.9	3.4
45-54 years	5.4	8.1	2.7
55-64 years	3.6	5.9	1.6
65-74 years	2.7	3.6	1.9
75-84 years	3.0	4.0	2.3
85 years +	3.3	5.1	2.6

1/ Includes deaths with ICD-9 codes E960-E978.

NOTE: — Represents zero. 0.0 Rounds to zero.

► **Chart 20. Chronic Liver Disease and Cirrhosis Death Rates by Age and Sex, Indians and Alaska Natives (1991-1993)**

Indian males are more likely to die from chronic liver disease and cirrhosis than Indian females for all age groups except 15 to 24 years. However, the Indian female death rate is relatively close to the male rate for some of the age groups. In contrast, Indian females have a much higher death rate due to this cause than females in the U.S. All Races and White populations. For example, the peak death rate for Indian females (66.8 deaths per 100,000 population for women aged 75 to 84 years) is 2.7 and 2.6 times the peak rates (24.8 and 25.7, also for women 75 to 84 years old) for All Races and White females, respectively.



► **Table 20. Chronic Liver Disease and Cirrhosis 1/ Mortality Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1991-1993, and U.S. All Races and White Populations, 1992  
Rate per 100,000 Population

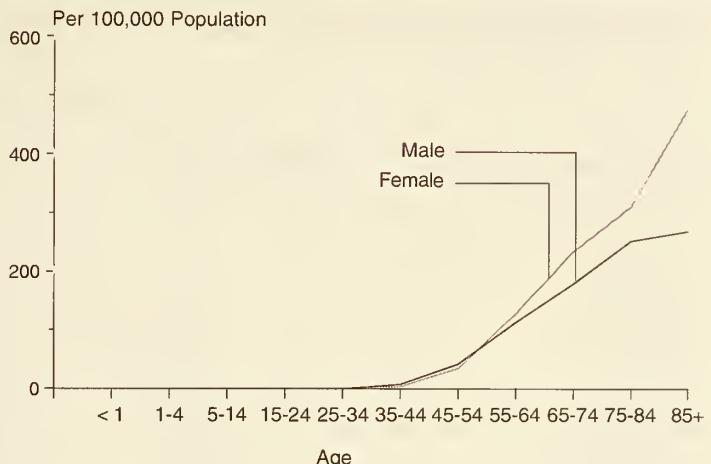
Indian and Alaska Native			
Age Group	Both Sexes	Male	Female
Under 1 year	—	—	—
1-4 years	—	—	—
5-14 years	—	—	—
15-24 years	1.0	0.9	1.2
25-34 years	15.1	15.6	14.6
35-44 years	48.1	56.2	40.5
45-54 years	77.8	98.1	59.2
55-64 years	83.4	107.9	62.1
65-74 years	71.1	77.0	66.4
75-84 years	76.8	91.5	66.8
85 years +	54.8	74.8	43.3
U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	0.6	0.7	0.5
1-4 years	0.0	0.1	0.1
5-14 years	0.0	0.0	0.0
15-24 years	0.1	0.1	0.1
25-34 years	1.8	2.4	1.2
35-44 years	9.0	13.7	4.5
45-54 years	16.7	24.9	8.9
55-64 years	27.6	40.2	16.4
65-74 years	33.9	47.0	23.7
75-84 years	32.3	44.7	24.8
85 years +	24.2	36.5	19.5
U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	0.6	0.7	0.5
1-4 years	0.1	0.1	0.1
5-14 years	0.0	0.0	0.0
15-24 years	0.1	0.1	0.1
25-34 years	1.6	2.1	1.0
35-44 years	8.2	12.6	3.8
45-54 years	15.3	22.8	8.0
55-64 years	26.8	39.1	15.6
65-74 years	33.8	46.5	23.7
75-84 years	33.3	45.7	25.7
85 years +	24.8	37.9	19.8

1/ Includes deaths with ICD-9 code 571.

NOTE: — Represents zero. 0.0 Rounds to zero.

### ► Chart 21. Diabetes Mellitus Death Rates by Age and Sex, Indians and Alaska Natives (1991-1993)

Indian women die from diabetes mellitus at a greater rate than Indian males for age groups 55 years and older. In the U.S. All Races and White populations, however, the male rate exceeds the female rate for each of these age groups. Deaths due to diabetes mellitus become relatively high starting with age 45. For these age groups, Indian females are much more likely to die from this cause than females in the other two population groups. The Indian female rate ranges from 35.7 deaths per 100,000 population to 476.2, while the All Races female rate ranges from 10.0 to 248.1 and the White female rate ranges from 8.0 to 233.5.



► **Table 21. Diabetes Mellitus 1/ Mortality Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1991-1993, and U.S. All Races and White Populations, 1992  
Rate per 100,000 Population

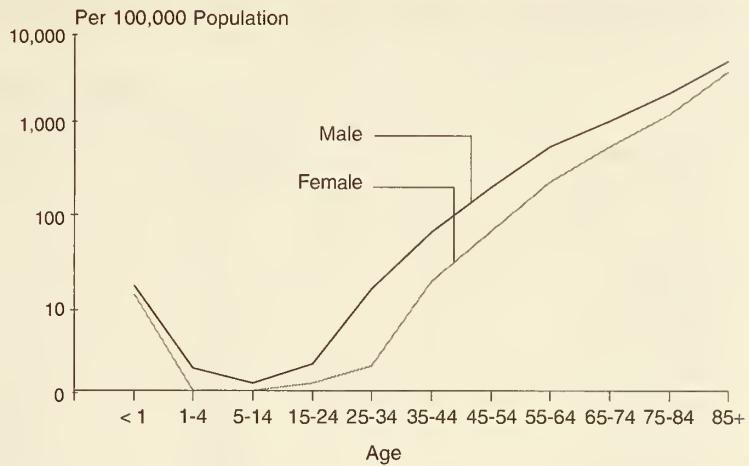
Indian and Alaska Native			
Age Group	Both Sexes	Male	Female
Under 1 year	—	—	—
1-4 years	—	—	—
5-14 years	—	—	—
15-24 years	0.4	0.6	0.3
25-34 years	0.9	1.3	0.6
35-44 years	6.6	8.6	4.8
45-54 years	38.9	42.4	35.7
55-64 years	121.5	114.1	127.8
65-74 years	209.6	179.2	233.8
75-84 years	287.1	251.6	311.0
85 years +	400.3	269.1	476.2
U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	0.0	0.2	—
1-4 years	0.0	0.0	0.0
5-14 years	0.1	0.1	0.1
15-24 years	0.4	0.4	0.3
25-34 years	1.6	1.8	1.3
35-44 years	4.0	4.9	3.2
45-54 years	11.7	13.5	10.0
55-64 years	34.0	35.9	32.3
65-74 years	75.7	78.6	73.6
75-84 years	142.9	151.0	138.1
85 years +	253.8	268.7	248.1
U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	0.1	0.2	—
1-4 years	0.0	0.0	0.0
5-14 years	0.1	0.1	0.1
15-24 years	0.3	0.3	0.2
25-34 years	1.4	1.7	1.2
35-44 years	3.5	4.4	2.6
45-54 years	9.7	11.5	8.0
55-64 years	28.7	31.5	26.0
65-74 years	68.1	73.3	64.0
75-84 years	133.2	144.8	126.1
85 years +	242.1	264.6	233.5

1/ Includes deaths with ICD-9 code 250.

NOTE: — Represents zero. 0.0 Rounds to zero.

#### ► Chart 22. Diseases of the Heart Death Rates by Age and Sex, Indians and Alaska Natives (1991-1993)

Indian men are more apt to die from diseases of the heart than Indian women for every age group. For Indian adult age groups, the ratio of the male death rate to the female rate ranges from 1.3 to 1 to 3.7 to 1. The Indian female diseases of the heart death rate is similar to that of U.S. All Races females for the younger age groups, but becomes increasingly less (proportionately) than the rate of its All Races counterpart for age groups over 64 years. The Indian female rate also becomes increasingly less (proportionately) in comparison to that of White females for age groups over 64 years. However, the Indian female rate is 1.2 to 1.4 times the White female rate for age groups 35 to 64 years.



► **Table 22. Diseases of the Heart 1/ Mortality Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1991-1993, and U.S. All Races and White Populations, 1992  
Rate per 100,000 Population

Age Group	Indian and Alaska Native		
	Both Sexes	Male	Female
Under 1 year	15.9	17.7	14.1
1-4 years	2.5	3.8	1.1
5-14 years	0.9	1.4	0.2
15-24 years	3.0	4.1	1.8
25-34 years	9.0	14.3	3.9
35-44 years	38.4	61.4	16.8
45-54 years	127.0	196.9	63.1
55-64 years	380.8	560.3	225.1
65-74 years	786.7	1,078.5	555.3
75-84 years	1,677.9	2,244.9	1,295.5
85 years +	4,386.7	5,173.4	3,931.1

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	17.9	18.8	17.1
1-4 years	1.8	1.9	1.8
5-14 years	0.8	0.9	0.7
15-24 years	2.7	3.4	2.0
25-34 years	8.1	0.8	5.4
35-44 years	31.8	48.0	16.2
45-54 years	114.6	174.4	58.2
55-64 years	346.5	506.5	205.5
65-74 years	847.9	1,182.6	589.0
75-84 years	2,147.3	2,758.5	1,778.0
85 years +	6,513.5	7,162.3	6,265.7

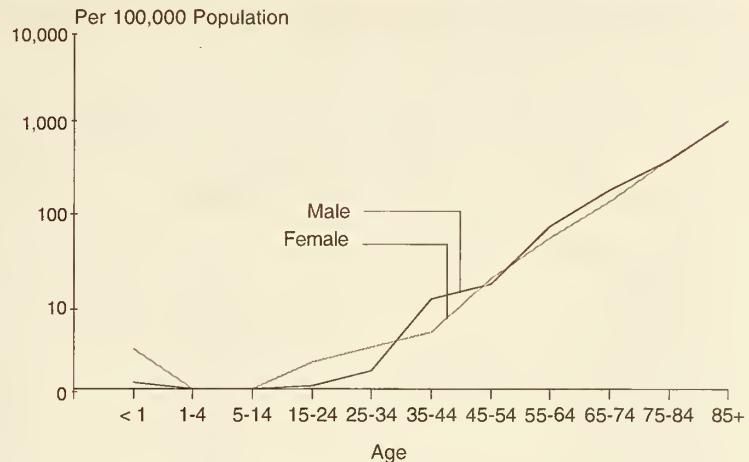
  

U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	15.2	16.4	13.9
1-4 years	1.5	1.4	1.6
5-14 years	0.6	0.7	0.6
15-24 years	2.2	2.7	1.6
25-34 years	6.5	8.9	4.1
35-44 years	27.3	42.7	11.9
45-54 years	103.9	162.0	47.4
55-64 years	327.2	485.8	181.5
65-74 years	826.8	1,163.7	559.1
75-84 years	2,141.4	2,765.6	1,758.6
85 years +	6,602.9	7,295.2	6,338.8

1/ Includes deaths with ICD-9 codes 390-398, 402, 404-429.

► **Chart 23. Cerebrovascular Diseases Death Rates by Age and Sex, Indians and Alaska Natives (1991-1993)**

The cerebrovascular diseases death rates are similar for Indian males and females among the various age groups. The Indian female death rate for this cause tends to be greater than the rates for U.S. All Races and White females in age groups under 75 years. The Indian female rate, however, is less than the rates for females in these populations for age groups 75 years and over.



► **Table 23. Cerebrovascular Diseases 1/ Mortality Rates by Age and Sex**

American Indians and Alaska Natives, IHS Service Area, 1991-1993, and U.S. All Races and White Populations, 1992  
Rate per 100,000 Population

Age Group	Indian and Alaska Native		
	Both Sexes	Male	Female
Under 1 year	3.0	2.0	4.0
1-4 years	—	—	—
5-14 years	0.2	0.5	—
15-24 years	1.3	1.2	1.5
25-34 years	2.3	1.6	3.0
35-44 years	7.3	10.3	4.4
45-54 years	16.6	15.3	17.8
55-64 years	58.8	68.5	50.4
65-74 years	151.9	177.5	131.5
75-84 years	388.4	381.1	393.3
85 years +	1,058.3	1,091.5	1,039.1

U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	4.1	5.3	3.0
1-4 years	0.3	0.3	0.4
5-14 years	0.2	0.2	0.1
15-24 years	0.5	0.6	0.5
25-34 years	1.9	1.9	1.9
35-44 years	6.5	6.9	6.1
45-54 years	17.5	19.5	15.8
55-64 years	46.4	53.4	40.6
65-74 years	135.3	156.2	119.4
75-84 years	468.2	510.1	443.3
85 years +	1,566.0	1,501.5	1,591.7

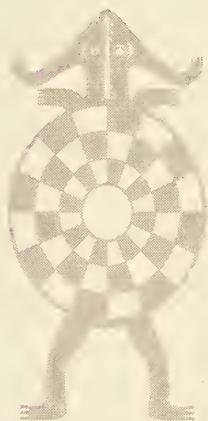
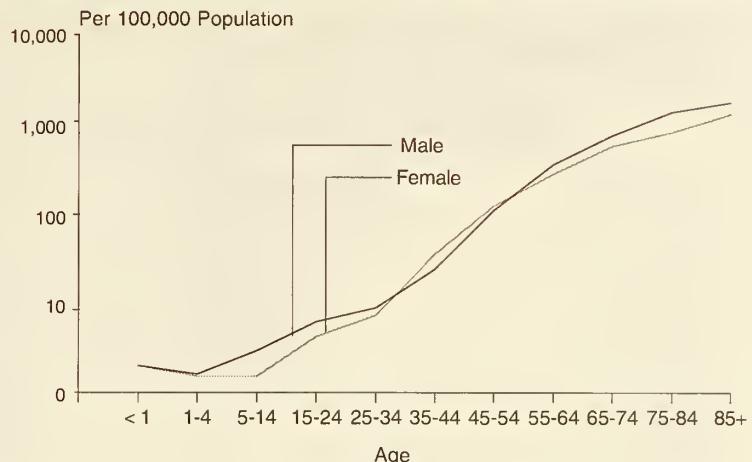
U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	3.3	4.1	2.5
1-4 years	0.3	0.3	0.3
5-14 years	0.2	0.1	0.2
15-24 years	0.5	0.6	0.4
25-34 years	1.5	1.6	1.4
35-44 years	4.8	5.0	4.5
45-54 years	13.9	15.4	12.5
55-64 years	39.4	44.5	34.7
65-74 years	124.7	143.5	109.8
75-84 years	459.4	500.0	434.5
85 years +	1,584.7	1,522.5	1,608.4

1/ Includes deaths with ICD-9 codes 430-438.

NOTE: — Represents zero.

► **Chart 24. Malignant Neoplasm Death Rates by Age and Sex, Indians and Alaska Natives (1991-1993)**

Indian female age-specific malignant neoplasm death rates are generally less than those for Indian males. The Indian female rates only exceed the male rates for age groups 1 to 4 and 35 to 54 years. However when compared to the general population, it is clear that U.S. All Races and White people are more likely to die from malignant neoplasms than Indians. Indian female age-specific rates are less than those for females of these two population groups for all age groups except 15 to 24 years.



► **Table 24. Malignant Neoplasm 1/ Mortality Rates by Age and Sex**

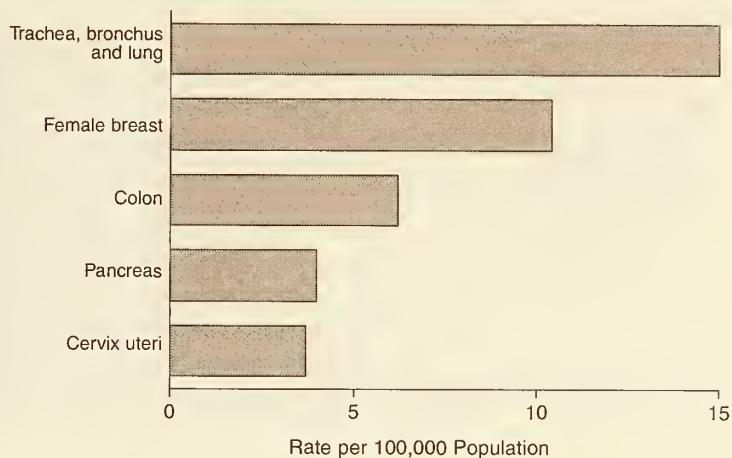
American Indians and Alaska Natives, IHS Service Area, 1991-1993, and U.S. All Races and White Populations, 1992  
Rate per 100,000 Population

Age Group	Indian and Alaska Native		
	Both Sexes	Male	Female
Under 1 year	2.0	2.0	2.0
1-4 years	1.9	1.6	2.3
5-14 years	2.2	2.9	1.5
15-24 years	5.2	6.1	4.2
25-34 years	8.1	8.9	7.3
35-44 years	29.6	24.0	34.9
45-54 years	115.7	109.2	121.7
55-64 years	314.3	359.0	275.5
65-74 years	645.2	753.6	559.3
75-84 years	1,037.7	1,375.9	809.7
85 years +	1,464.1	1,779.3	1,281.5
U.S. All Races			
Age Group	Both Sexes	Male	Female
Under 1 year	2.4	2.5	2.2
1-4 years	3.1	3.1	3.0
5-14 years	3.0	3.4	2.6
15-24 years	5.0	5.9	4.1
25-34 years	12.5	12.1	12.9
35-44 years	42.3	38.1	46.5
45-54 years	150.3	153.8	147.0
55-64 years	437.8	513.4	369.7
65-74 years	873.4	1,111.1	686.5
75-84 years	1,350.9	1,882.8	1,025.6
85 years +	1,787.3	2,802.7	1,394.1
U.S. White			
Age Group	Both Sexes	Male	Female
Under 1 year	2.6	2.7	2.4
1-4 years	3.2	3.3	3.0
5-14 years	3.1	3.5	2.7
15-24 years	5.0	6.0	4.1
25-34 years	12.1	11.9	12.2
35-44 years	39.7	35.6	43.9
45-54 years	142.4	142.8	142.1
55-64 years	424.7	490.8	364.0
65-74 years	860.8	1,082.7	684.5
75-84 years	1,342.7	1,854.3	1,029.0
85 years +	1,775.5	2,783.6	1,390.9

1/ Includes deaths with ICD-9 codes 140-208.

► **Chart 25. Mortality Rates for Leading Cancer Sites: Females, Indians and Alaska Natives (1991-1993)**

The leading site for cancer deaths among Indian women is trachea, bronchus, and lung. Forty-five percent more Indian women die of this type of cancer than the next leading site, breast. In turn, 68 percent more Indian women die from breast cancer than colon cancer, the third leading site. There is also a big drop in frequency of deaths from colon cancer to the fourth leading site, pancreas. In contrast, the next two leading sites (cervix uteri and ovary) have cancer mortality rates similar to pancreas. Women in the U.S. All Races and White populations have the same top three leading sites for cancer deaths, same order, as Indian women. Pancreas is the fourth leading site for All Races women, as it is for Indian women, but it is number five for White women. Ovary (sixth for Indian women) is fifth for All Races women and fourth for White women. Cervix uteri, the fifth leading Indian site, is eighth for All Races and ninth for Whites.



**Table 25. Twenty Leading Sites for Cancer Deaths for Female Decedents**

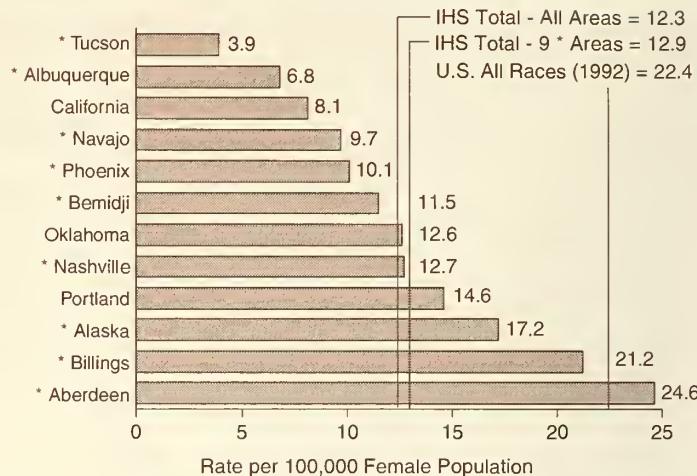
American Indians and Alaska Natives, IHS Service Area, 1991-1993  
Rate per 100,000 Population

Site of Cancer Death	FEMALE	Number	Rate
All Sites		1,517	78.4
Trachea, bronchus and lung		291	15.0
Female breast		201	10.4
Colon		120	6.2
Pancreas		78	4.0
Cervix uteri		72	3.7
Ovary		70	3.6
Gallbladder		60	3.1
Kidney		50	2.6
Liver		49	2.5
Stomach		49	2.5
Leukemia		45	2.3
Rectum, rectosigmoid junction and anus		28	1.4
Bladder		20	1.0
Brain		17	0.9
Esophagus		14	0.7
Pharynx		13	0.7
Melanoma of skin		9	0.5
Tongue		7	0.4
Larynx		5	0.3
Thyroid gland		5	0.3
Cecum, appendix and ascending colon		5	0.3
All other sites		309	

NOTE: See appendix titled "Methods Used to Rank Leading Sites of Cancer Deaths."

► **Chart 26. Age-Adjusted Breast Cancer Mortality Rates for Females, Calendar Years 1991-1993**

The Indian female age-adjusted breast cancer death rate (12.3 deaths per 100,000 population) is 55 percent of the rate for U.S. All Races females (22.4). The rate varies considerably by IHS Area, ranging from 3.9 in Tucson to 24.6 in Aberdeen, which is greater than the U.S. All Races rate.



**Table 26. Age-Adjusted Breast Cancer Mortality Rates for Females, Calendar Years 1991-1993**

	Total Deaths	Rate 1/
U.S. All Races (1992)	43,098	22.4
All IHS Areas	201	12.3
9 * Areas 2/	116	12.9
Aberdeen *	24	24.6
Alaska *	17	17.2
Albuquerque *	7	6.8
Bemidji *	9	11.5
Billings *	12	21.2
California	12	8.1
Nashville *	10	12.7
Navajo *	22	9.7
Oklahoma	50	12.6
Phoenix *	14	10.1
Portland	23	14.6
Tucson *	1	3.9

1/ Age-adjusted rate per 100,000 female population. Rates based on a small number of deaths should be interpreted with caution.

2/ The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

► Chart 27. Age-Adjusted Cervical Cancer Mortality Rates for Females, Calendar Years 1991-1993

The Indian female age-adjusted cervical cancer death rate (4.3 deaths per 100,000 population) is 1.6 times the rate for U.S. All Races females (2.7). The rate varies considerably by IHS Area, ranging from 0.8 in Albuquerque to 14.2 in Aberdeen, which is over 5 times the U.S. All Races rate.

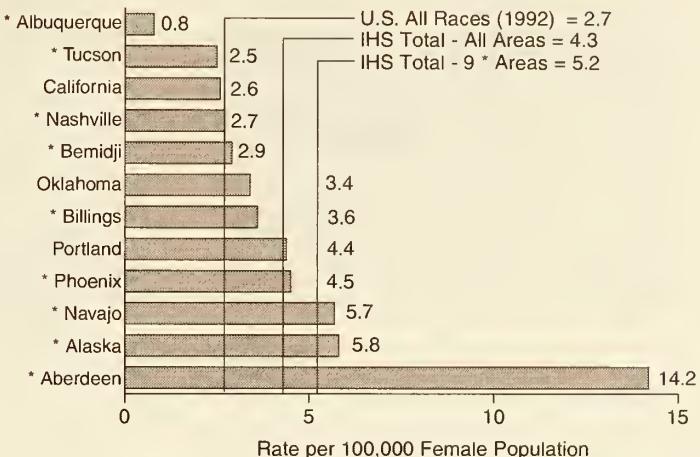


Table 27. Age-Adjusted Cervical Cancer Mortality Rates for Females, Calendar Years 1991-1993

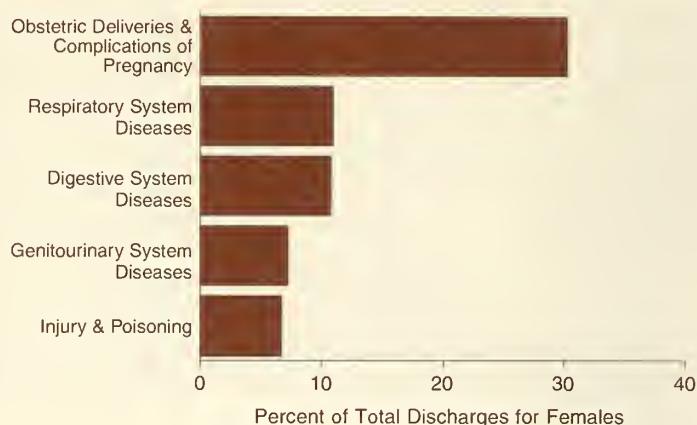
	Total Deaths	Rate 1/
U.S. All Races (1992)	4,641	2.7
All IHS Areas	72	4.3
9 * Areas 2/	48	5.2
Aberdeen *	13	14.2
Alaska *	6	5.8
Albuquerque *	1	0.8
Bemidji *	2	2.9
Billings *	2	3.6
California	4	2.6
Nashville *	2	2.7
Navajo *	14	5.7
Oklahoma	13	3.4
Phoenix *	7	4.5
Portland	7	4.4
Tucson *	1	2.5

1/ Age-adjusted rate per 100,000 female population. Rates based on a small number of deaths should be interpreted with caution.

2/ The 3 IHS Areas that do not have an asterisk (California, Oklahoma, and Portland) appear to have a problem with underreporting of Indian race on death certificates. Therefore a separate IHS rate was calculated excluding these 3 Areas.

► **Chart 28. Leading Causes of Hospitalization for Females, IHS and Tribal Direct and Contract Hospitals, FY 1994**

For Indian females, 30.3 percent of all discharges from IHS and Tribal direct and contract general hospitals pertain to obstetric deliveries and complications of puerperium and pregnancy. This is followed by respiratory system diseases (10.9 percent) and digestive system diseases (10.8 percent). For Indian males, the top three causes are respiratory system diseases, injury and poisoning, and digestive system diseases.



**Table 28. Ten Leading Causes of Hospitalization by Sex**

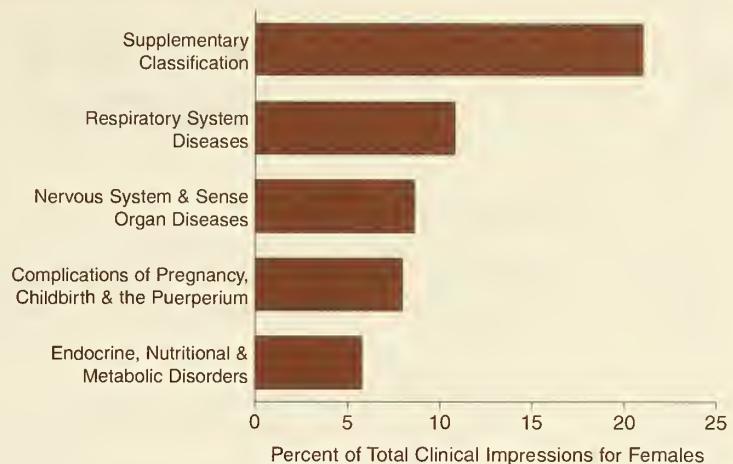
Indian Health Service and Tribal Direct and Contract General Hospitals, Fiscal Year 1994

<b>MALE</b>		<b>FEMALE</b>			
Category	Number of Discharges	Percent of Total	Category	Number of Discharges	Percent of Total
All categories	33,966	100.0	All categories	50,470	100.0
Respiratory system diseases	5,643	16.6	Obstetric deliveries and complications of pregnancy & puerperium	15,279	30.3
Injury & poisoning	5,137	15.1	Respiratory system diseases	5,492	10.9
Digestive system diseases	4,625	13.6	Digestive system diseases	5,475	10.8
Circulatory system diseases	3,241	9.5	Genitourinary system diseases	3,653	7.2
Symptoms, signs, & ill-defined conditions	2,728	8.0	Injury & poisoning	3,366	6.7
Mental disorders	2,427	7.1	Symptoms, signs, & ill-defined conditions	2,859	5.7
Skin and subcutaneous tissue diseases	1,898	5.6	Circulatory system diseases	2,837	5.6
Endocrine, nutritional & metabolic disorders	1,661	4.9	Endocrine, nutritional & metabolic disorders	2,011	4.0
Genitourinary system diseases	1,132	3.3	Mental disorders	1,447	2.9
Musculoskeletal system and connective tissue diseases	1,110	3.3	Skin and subcutaneous tissue diseases	1,387	2.7
All other	4,364	12.8	All other	6,664	13.2

SOURCE: IHS and Tribal Direct: On-Request Report 21  
IHS and Tribal Contract: On-Request Report 19

► **Chart 29. Leading Causes of Ambulatory Medical Visits for Females, IHS and Tribal Direct and Contract Facilities, FY 1994**

For Indian females and males, the three leading causes of ambulatory medical visits in IHS and Tribal direct and contract facilities are supplementary classification, respiratory system diseases, and nervous system and sense organ diseases. The sexes differ on the fourth leading cause — for females it is complications of pregnancy, childbirth, and the puerperium and for males it is injury and poisoning.



**Table 29. Number of Ambulatory Medical Clinical Impressions for Leading Major Categories by Sex**

Indian Health Service and Tribal Direct and Contract Facilities, Fiscal Year 1994

<b>MALE</b>		<b>FEMALE</b>	
Category	Number of Clinical Impressions	Category	Number of Clinical Impressions
All categories	3,204,733	All categories	5,202,917
Supplementary classification	678,572	Supplementary classification	1,097,787
Respiratory system diseases	391,668	Respiratory system diseases	564,259
Nervous system & sense organ diseases	362,685	Nervous system & sense organ diseases	452,857
Injury & poisoning	213,751	Complication of pregnancy, childbirth & the puerperium	419,885
Circulatory system diseases	182,307	Endocrine, nutritional & metabolic disorders	304,753
Skin and subcutaneous tissue diseases	177,539	Genitourinary system diseases	271,582
Endocrine, nutritional & metabolic disorders	172,141	Musculoskeletal system diseases	259,977
Musculoskeletal system diseases	149,237	Symptoms, signs, & ill-defined conditions	246,669
Mental disorders	145,887	Skin and subcutaneous tissue diseases	230,619
Symptoms, signs, & ill-defined conditions	145,416	Circulatory system diseases	212,387
All other	585,530	All other	1,142,142

SOURCE: Direct: Annual Report 1C  
Contract: Annual Report 3A

# Methods Used to Rank Leading Sites of Cancer Deaths

ICD -9  
Codes

## Site of Cancer Death

Malignant neoplasms, including neoplasms of lymphatic and hematopoietic tissues.....	140-208
Malignant neoplasms of lip, oral cavity, and pharynx .....	140-149
# Of lip .....	140
# Of tongue .....	141
# Of pharynx .....	146-149.0
Of other and ill-defined sites within the lip, oral cavity, and pharynx .....	142-145,149.1-149.9
Malignant neoplasms of digestive organs and peritoneum .....	150-159
# Of esophagus .....	150
# Of stomach .....	151
# Of small intestine, including duodenum .....	152
# Of colon .....	153
Hepatic and splenic flexures and transverse colon .....	153.0-153.1,153.7
Descending colon .....	153.2
Sigmoid colon .....	153.3
# Cecum, appendix, and ascending colon .....	153.4-153.6
Other and colon, unspecified .....	153.8-153.9
# Of rectum, rectosigmoid junction, and anus .....	154
# Of liver and intrahepatic bile ducts .....	155
Liver, primary .....	155.0
Intrahepatic bile ducts .....	155.1
Liver, not specified as primary or secondary .....	155.2
# Of gallbladder and extrahepatic bile ducts .....	156
# Of pancreas .....	157
Of retroperitoneum, peritoneum, and other and ill-defined sites within the digestive organs and peritoneum .....	158-159
Malignant neoplasms of respiratory and intrathoracic organs .....	160-165
# Of larynx .....	161
# Of trachea, bronchus, and lung .....	162
Of all other and ill-defined sites within the respiratory system and intrathoracic organs .....	160,163-165
Malignant neoplasms of bone, connective tissue, skin, and breast .....	170-175
Of bone and articular cartilage .....	170
Of connective and other soft tissue .....	171
# Melanoma of skin .....	172
Other malignant neoplasms of skin .....	173
# Of female breast .....	174
# Of male breast .....	175
Malignant neoplasms of genital organs .....	179-187
# Of cervix uteri .....	180
Of other parts of uterus .....	179,181-182
# Of ovary and other uterine adnexa .....	183
Of other and unspecified female genital organs .....	184
# Of prostate .....	185
# Of testis .....	186
# Of penis and other male genital organs .....	187

The causes designated by the symbol # were ranked to designate the leading sites of cancer deaths.

**Site of Cancer Death**

Malignant neoplasms of urinary organs . . . . .	188-189
# Of bladder . . . . .	188
# Of kidney and other and unspecified urinary organs . . . . .	189
Malignant neoplasms of other and unspecified sites . . . . .	190-199
# Of eye . . . . .	190
# Of brain . . . . .	191
Of other and unspecified parts of nervous system . . . . .	192
# Of thyroid gland and other endocrine glands and related structures . . . . .	193-194
Of all other and unspecified sites . . . . .	195-199
Malignant neoplasms of lymphatic and hematopoietic tissues . . . . .	200-208
# Lymphosarcoma and reticulosarcoma . . . . .	200
# Hodgkins disease . . . . .	201
Other malignant neoplasms of lymphoid and histiocytic tissue . . . . .	202
Multiple myeloma and immunoproliferative neoplasms . . . . .	203
# Leukemia . . . . .	204-208
Lymphoid leukemia . . . . .	204
Myeloid leukemia . . . . .	205
Monocytic leukemia . . . . .	206
Other and unspecified leukemia . . . . .	207-208

The causes designated by the symbol # were ranked to designate the leading sites of cancer deaths.





